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Dialogic space during mother-child interaction in the early years

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BSc(Hons), MA, EYPS

Thesis submitted to the Open University in part fulfilment of the requirements of the degree of Doctorate in Education

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Abstract

The co-construction of meaning-making during mother-child activity around the concepts of colour and size is considered through the lens of socio-cultural theory. The metaphor of scaffolding is critiqued in relation to its utility for explaining interactions between parent and child in problem-solving activity. Specifically, this thesis offers an investigation of the extent to which Wegerif's (2011b) notion of 'dialogic space' can inform a better understanding of the processes of meaning-making that take place between a mother and her pre-school child.

An exploratory, inductive case study was conducted in a pre-school setting with 13 mother-child dyads. The children were 30-36 months old. The dyads were observed while engaged in activities that involved sorting blocks according to their colour and size. Video-recordings of the observations were transcribed and the transcriptions were then subject to a thematic Socio-Cultural Discourse Analysis (SCDA). Also mothers took part in semi-structured interviews, incorporating Video-Stimulated Reflective Dialogue (VSRD). These were used to shed light on the mothers' perspectives of the activity and informed my analysis of the transcriptions.

The theoretical benefits of this thesis include extended theorising about dialogic space by considering the context of parent and pre-school children's dialogues. It provides significant contributions to educational theory by evidencing how pause and physical and psychological resources can be mobilised by interlocutors to resource their construction of dialogic space during activities with young children. Implications for practice arising from this study include the need for practitioners to be alert to how the theory of dialogic space can inform a better understanding of how young children can be creatively engaged in dialogue in asymmetrical interactions that harness their understanding of colour and size.

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Chapter 1: Introduction

1.1 General introduction

This research adopts a socio-cultural theoretical perspective to exploring how meaning is co-constructed between parents and pre-school children during joint activity. Dialogues focusing on the concepts of colour and size form the basis for this inquiry. More specifically, this thesis offers a critical exploration of the extent to which Wegerif's (2011b) notion of 'dialogic space' can inform a better understanding of the processes of meaning making that take place when a mother and her pre-school child (30-36 months) are involved in a joint activity. It also offers significant extensions to dialogic theory. Thus far, studies into dialogic space have been focused primarily on classroom dialogues and its application to parent-child interactions remains unexplored.

1.2 Research rationale

Initially, I had intended to develop and evaluate an intervention programme to support caregivers in their scaffolding relationships with pre-school children. However, through observations of mothers and pre-school children and engaging with wider literature, I became increasingly aware of the shortfalls of the scaffolding metaphor for explaining how parent and child creatively co-construct meaning (Mascolo, 2005; Valsiner, 2005). My attention turned to reading prior empirical research that investigated dialogic talk in classroom settings (Littleton and Mercer, 2013; Mercer and Littleton, 2007; Mercer, 1995) and more specifically

dialogic space (Wegerif, 2010a; 2010b) and considering how these theories related to early years education.

There are also practice-based issues that have informed my research. Specifically, my research is borne out of my concern to address the following practice-based issues by contributing to educational theory:

1. Despite the Early Years Foundation Stage (EYFS) curriculum's emphasis on 'parents as partners' (DCFS, 2007, p.4) very little empirical research exists investigating how dialogues between parent and child *within* educational establishments co-construct knowledge. On a regular basis, as part of my professional role within an early years setting, I observe mothers and their children talking together to make sense of problems whilst engaged in activities. However, these mother and child dialogues are rarely utilised by practitioners to understand the child's developing understanding of concepts. Instead, tracking the child's progress in conceptual understanding is dominated by evidencing the child's achievement outcomes rather than their engagement in dialogic processes. My research will address this gap by investigating the potential benefits to practice of parents and children talking together whilst engaged in activities focusing on colour and size.
2. The 'Every Child a Talker' (ECAT) programme was implemented throughout the UK to promote and develop early language skills for all children aged birth to four years. However, very little empirical research exists into dialogic teaching in the early years. Dialogic teaching refers to harnessing 'the power of talk to engage children, stimulate and extend their thinking, and advance

their learning and understanding' (Alexander, 2008, p.37). Dialogic talk has received attention from researchers investigating educational issues such as classroom talk and dialogue amongst peers (Littleton and Mercer, 2013; Mercer and Littleton, 2007; Wells, 1999) with older children but not with pre-school children. The research in this thesis addresses this shortcoming by exploring the utility of dialogic space for understanding the dialogic process involved during parent-child interaction in the early years.

3. Despite the EYFS curriculum stating that creativity is important to all areas of learning (DCSF, 2008), much of empirical research into adult and pre-school child interaction has focused on the notion of scaffolding metaphor (Wood and Middleton, 1975). Crucially, the metaphor of scaffolding fails to address the creative co-construction of meaning *between* partners. Creative relationships within school-based environments have been explored by Littleton and Mercer (2013) but relatively little literature exists into the creative ways in which parent and pre-school child explore meaning together. This thesis adopts the notion that creativity is borne out of multiple perspectives. Consequently, I define creativity as: 'the unpredictable emergence of new perspectives in a dialogue where a new perspective is a new way of seeing the problem' (Wegerif, McLaren, Chamrada, Scheuer, Mansour, Mikšàtko and Williams, 2010, p.614). This approach is used to explore how parent and child think together (Littleton and Mercer, 2013).

My research will inform the development of educational theory within the field of pre-school dialogues and dialogic space as well as informing practice in the early years education setting in which I work. I have chosen to focus my research on exploring parent-child dialogues about the concepts of size and colour. The rationale for choosing these concepts is discussed below.

1.3 Conceptual development in the pre-school child

Near the start of my research journey there was an incident during my teaching day that was thought provoking and called upon me to step back and consider an issue (Tripp, 2003). A parent approached me and asked if she could “have a word”. The parent was concerned that her child was not making any progress in learning about colours. She explained that one day she felt he had grasped it but another day he would get every colour wrong. She asked me for advice about what she could do to help him. All observations that had been conducted in the educational setting indicated the child was performing as expected so I reassured her that her child was developing within expected guidelines and provided her with a few tips about home-based colour-related activities that she could engage in with her child. After this conversation I thought through the scenario. I was disappointed with my response to her concerns. I felt I had not provided the answers she was looking for. Also, I was intrigued and asked myself: ‘how do we teach young children concepts such as colour?’ This event provided the motivation for focusing my thesis on the pre-school child’s development of understanding the concepts of colour and size.

Within my workplace the Early Years Foundation Stage (EYFS) curriculum is followed. The EYFS curriculum is based upon the foundations set out in the

Rumbold Report (Her Majesty's Stationery Office, 1990) which states that the *process* of a child's learning is just as important as the outcomes achieved. The Rumbold Report further states that children learn through first-hand experience, purposeful play and interaction with others (Her Majesty's Stationery Office, 1990). The emphasis on the learning as a process that involves interaction with others echoes the central principles of socio-cultural theory within which this thesis is grounded. According to the EYFS curriculum, the unique child is 'beginning to understand variations in size' between the ages of 22-36 months (DCFS, 2008, p.73), and will 'explore colour and begin to differentiate between colours' between the ages of 30-50 months (DCFS, 2008, p.110). Furthermore, children in the age range of 22-36 months will begin to organise and categorise objects by sorting into piles, and experiment with blocks, colours and markers (DCFS, 2008, p.73). The EYFS curriculum is concerned with supporting children's development of concepts through positive inter-personal relationships and recommends that adults introduce descriptive vocabulary like "big" and "small" in everyday play situations 'to enable children to talk about their observations and experiences' (DCFS, 2008, p.110). Additionally, the EYFS curriculum states that children aged between 22-36 months are using 'language as a powerful means of widening contacts, sharing feelings, experiences and thoughts' (DCFS, 2008, p.49), and children aged 30-50 months 'use talk to give new meanings to objects and actions' and are able to 'talk activities through, reflecting on and modifying what they are doing' (DCFS, 2008, p.50). This focus on the importance of talk for developing a young child's understanding of concepts makes concept-development an appropriate focus for my research. I have chosen to focus on the child's development of their understanding of the concepts

of size and colour because these are two areas of conceptual development that are appropriate for the age of the children within my workplace and involved in this study.

The child's conceptual development is a relatively complex and long process. Socio-cultural theories describing the child's journey in securing knowledge about concepts is at times contradictory, with the certainty of word meaning within a sociocultural context brought into question. However, studies undertaken from a socio-cultural theoretical perspective agree that the learning of concepts occurs in the first instance on the social plane, between individuals engaged in dialogue. Socio-cultural theories on the child's conceptual development are discussed in the following sub-section.

1.3.1 A Vygotskyian perspective on the child's development of concepts

From a Vygotskyian perspective, concept development (i.e. an understanding of the meaning of words) is a lengthy process that begins in early childhood. Vygotsky (1986) argues that concepts cannot be assimilated by the child in a ready-made form but are developed over time in the cooperation between adults and children. Vygotsky (1986, p.149) states:

[A] concept is more than the sum of certain associative bonds formed by memory, more than a mere mental habit; it is a complex and genuine act of thought that cannot be taught by drilling, but can be accomplished only when the child's mental development itself has reached the requisite level.

In Vygotsky's (1986) view, concept development is a dialectic process; a process whereby understanding is established through a merger of a point of view and a counter point of view in line with social, historically and culturally established realities. As social, historical and cultural realities are never fixed but finite the development of concepts is considered spiral rather than circular due to continued changing realities (Cole, 1998). The origins of concept development lie in the pre-school child's development of complexes. Such complexes begin on a very random, trial and error basis, matching objects by chance (Vygotsky, 1986). This progresses to the child making complexes though the similar and differing attributes of objects, creating chain-like sequences of related objects (Vygotsky, 1986). 'The principal function of complexes is to establish bonds and relations' (Vygotsky, 1986, p.135). At the complex stage, word meanings as perceived by the child refer to the same objects that the adult has in mind, thus ensuring understanding between the adult and child (Vygotsky, 1986).

An intermediate stage between the child's development of complexes and the development of fully formed concepts is where the child understands in terms of pseudoconcepts. Vygotsky argues that Piaget's (1932) theories on 'participation', the term applied to the connections made between objects that have no logical attributes, is a characteristic of pseudoconcept and signifies the difference between complex thinking and conceptual thinking. A pseudoconcept held by a child may be viewed externally as the same as a concept in the adult, but the two differ fundamentally. Essentially the pseudoconcept is formed on the basis of the associative bonds between objects, opposed to logical conceptual thinking of the

adult's concepts (Vygotsky, 1986). Despite these profound intellectual differences, a pseudoconcept and a concept's functional equivalence enables successful dialogue and mutual understanding between the child and adult, which plays a decisive role in turning words into concepts. Verbal communication between adults and children plays a vital role in transforming the 'germinating seed' of the child's pseudoconcept into fully formed conceptual thinking (Vygotsky, 1986, p.123).

Viewing participation from a dialogic perspective offers another explanation regarding the child's development of concepts. Wegerif states: 'A dialogic perspective, on the other hand, assumes such 'participation' as the ineluctable context of thought' (2008, p.357). Furthermore, from the perspective of the social construction of realities 'all that we take for granted can also be challenged' (Gergen, 1999, p.6). Thus, following Gergen: '[as] we speak together, listen to new voices, raise questions, ponder alternatives and play at the edges of common sense we cross the threshold into new worlds of meaning. The future is ours-together-to create' (1999, p.6). From the social constructionist perspective, meaning is not a universal reality but many socially constructed (and re-constructed) realities. Thus, even stable concepts in everyday life, such as colour and size, can be questioned and negotiated. It is important, therefore, to consider the role that the child plays in the mutual construction of concepts during dialogic interactions with an adult. This will be discussed further in the following sub-section.

1.3.2 Concept development: A dialectic or dialogic process?

Wegerif (2011a) questions Vygotsky's (1986) theories on how complexes develop into full concepts that are stable. Wegerif's theories of concept development are

built upon the work of Bakhtin (1981, 1986) and therefore contest concept development is a dialogic process not a dialectic process which forms the basis of Vygotsky's view. From a dialogic position, Wegerif (2011a) views that concepts can never be defined or pinned down as there is always debate in dialogue that can change the way a concept is thought of. In Wegerif's view, concepts are never completely formed, they 'are always fuzzy and they are always temporary, provisional staging posts' which are not real "things" at all but more like perspectives on reality achieved in a dialogue and then given a marker in language' (2011a, p.86). According to Wegerif (2011a), a concept is a fluid entity that can alter and evolve over time through dialogue rather than a static unit unchanging over time. Viewing the child's development of understanding concepts from a dialogical perspective means it is necessary to appreciate that nothing in the social world is ever fixed. Rather, perceptions of individuals, places and objects are formed through dialogue and situated in a social, cultural and historical context. The social, cultural and historical context is thus, in turn, shaped through the dialogue we share. An individual's perceptions of concepts will not only be shaped and changed when they are children but also as adults through situation and experience (Wegerif, 2011a). It is possible, therefore, that an adults' understanding of a concept can alter as a result of their engagement in a dialogue with a child. This points to the importance of taking a dialogic approach to investigating interactions between a child and an adult, rather than focusing on how an adult supports their child's understanding in a uni-directional way.

Wegerif suggests that in order to more fully understand concepts we need to favour 'a more genuinely dialogic account of what concepts are and how they can be

learned in a way that enables creative thought instead of constraining it' (2011a, p.85). Wegerif contends that: 'much concept learning can be understood in terms of dialogues' (2011a, p.85). Closer inspection of Vygotsky's original works, however, suggests that the two theorists may not be as distant in their conceptualization of concepts as Wegerif (2011a) implies. Vygotsky's work in relation to concept formation primarily focuses on logical scientific concepts. This has been criticised by researchers previously (Wegerif, 2011b) however Vygotsky (1986, p.135) does state:

From the point of view of dialectical logic, concepts used in our everyday speech cannot be called concepts in the strict sense of this word. Rather, they should be called generalized representations of things. These representations occupy an intermediate position between complexes and pseudoconcepts, on the one hand and real concepts on the other.

I interpret Vygotsky's writing as meaning that the concepts we use in everyday life, such as colour and size, cannot be treated with the same rigour as scientific concepts that have very tight definitions and boundaries. Vygotsky (1986) is stating that everyday concepts are not as fixed as the scientific concepts that he and his team of researchers focused upon, rather they are positioned in an 'intermediate' ground between concept and pseudoconcept (1986, p.135). This intermediate ground gives scope for the 'fuzzy' and 'temporary' nature of concepts that Wegerif (2011a) describes. Vygotsky argued that scientific and everyday concepts develop simultaneously whereby everyday concepts are 'given structure and order in the context of systematic scientific thought' (Daniels, 2007, p.311). Everyday concepts

used in early childhood such as big and small form the basis of understanding more complicated concepts about size and measurement; similarly scientific concepts come into use in everyday situations.

Vygotsky's (1986) argument regarding how the pre-school child travels along a journey from randomly selecting objects by chance to purposefully selecting objects in relation to their correct attribute is convincing. If a child has no previous knowledge of a concept, for instance colour, she/he will randomly make selections based on the colour of objects *and* other attributes of the object such as size and shape. This is a very broad selection process. However, as the child develops an understanding of the concept of colour her/his selection of attributes narrows. She/he is able to make choices based on the element of colour. She/he will not mistake colour for size or shape. For instance when asked, "What colour is this?" the child will not answer "square" or "triangle" as she/he is able to distinguish between attributes. In this sense, the child's thoughts are converging from all attributes to just one attribute supporting a dialectic view of development.

The dialogic theory of concept development, as argued by Wegerif (2011a), is however useful when the fine-tuning of understanding concepts such as colour is required. When an individual is familiar with the concept of colour they know which attribute of an object they are looking for. However, debate about specific colour names can occur. Colours, as with other concepts such as size, are based on a spectrum. Some reds appear more orange than others etc. Thus debate about exact colours can occur demonstrating the fuzzy nature of concepts as described by Wegerif (2011a). It is possible, therefore, that a child and adult may have different

perceptions on size and colour as the concepts are not fixed but fuzzy, and these perceptions can be altered through dialogue.

From a socio-cultural perspective, there is no single true perspective, either individually or collectively, because perspectives will change based on the ever-shifting social, historical and cultural world in which we live. An individual's perspective will change as they progress through life just as different individuals from different times and cultures will have differing perspectives. Regarding the world from a socio-cultural perspective enables us to realise that even 'absolute' concepts of our environment are not concrete entities but are culturally constructed in our social worlds. Ratner states that: 'people of different societies literally feel, think, sense, perceive, remember and construe their individuality differently' and uses several examples to highlight this point including our view of concrete properties of objects such as colour and size (1991, p.70). Ratner (1991) points out that although people in all cultures see colours; the way in which they perceive them is different, presenting itself as a linguistic difference between the cultures. Some cultures may name colours with reference to the object the colour represents such as peach and cotton, whereas other cultures use decontextualized words such as red and blue (Ratner, 1991). This not only results in linguistic differences between cultures but also as differences in the way the colours can be categorized and grouped together. Two colours which appear similar in one culture maybe classed as different in another (Ratner, 1991).

Similar cultural variations present themselves in other object classification, such as size perception. Ratner (1991) states certain individuals, due to their social

experience, will be far more accurate at judging precise measurements of objects than other individuals who do not share their culture. Ratner (1991) offers the explanation that individuals in some cultures maybe far more used to using contextual clues to aid them in judging measurements and so are able to be more precise in their judgement.

Perceiving concepts cross-culturally gives insight into how everyday concepts need not be 'secure' or fixed but will vary over time and space. This provides evidence for Wegerif's theories that concepts are 'perspectives on reality achieved in a dialogue' (2011a, p.86). Previous research into mother and child activity has not focused on the fluid nature of concepts rather they have considered concepts under question as absolutes fixed in time. Considering concepts as fixed 'truths' does not lie easily with the socio-cultural perspective of continually evolving meaning co-constructed between individuals. Learning is based on the foundations of social, cultural and historical meaning (Vygotsky, 1986). This meaning, however, is never fixed or static, rather it is constantly shifting in line with new meaning; thus the social, cultural and historical ground on which we construct our joint understanding will, in turn, evolve and change (Cole, 1998). Children learn from participating in their social worlds; from talking, listening and engaging with more experienced others in their culturally specific worlds (Rogoff, 1990). They learn to use the words and meanings of others into their own behaviours through appropriation (Wertsch, 1991). The ever-changing inter-connectivity of individuals, societies, culture and history alongside the view that knowledge is co-constructed rather than filtered down from expert to novice make investigations that evaluate static concepts problematic. This thesis details an exploratory investigation of how dialogues between parents and children

mediate meaning about the concepts of colour and size within an early years setting. The structure of the thesis is detailed in the next section.

1.4 Thesis Structure

Chapter 2 details a synthesis of existing literature that is relevant to this study. The literature review begins with a focus on the core socio-cultural principles and concepts that relate to child development in the early years. It questions the value of the notion of scaffolding (e.g. Wood and Middleton, 1975) and contends in support of literature that considers the co-construction of meaning between individuals. Dialogic theory and its application to school-aged children in formal education settings are discussed. The literature reviewed for this thesis is positioned in one coherent chapter for presentational purposes but the literature presented in Chapter 2 was read and evaluated alongside the practical side of conducting my research. I close the literature review by presenting my research questions.

Chapter 3 discusses my ontological, epistemological and methodological decisions and how these have been shaped by the literature with which I have engaged. I discuss how a case study is the most appropriate approach for my inductive, exploratory research. Issues of generalizability in the case study approach are discussed.

Chapter 4 details the research setting, participants and data collection methods employed in a two-phase case study. Context and ethical considerations of conducting research with parents and their pre-school children are discussed. Using

a socio-cultural theoretical framework, I reflect upon how my role as a practitioner-researcher, undertaking research within the familiar context of my workplace, has impacted on the study design and data collected. Also, I discuss how methods of data collection were employed in the exploratory and semi-structured phases of the case study in addressing my research questions.

Chapter 5 specifies my data analysis approach. I discuss how studies investigating the metaphor of scaffolding adopt methods of data analysis that are inadequate for addressing the complex and dynamic nature of dialogue. Details of how Sociocultural Discourse Analysis (SCDA) has been utilised in the analysis of classroom dialogue are provided before I consider how SCDA could be employed in this study. I provide a detailed account of the thematic analysis that I applied in generating themes. Acknowledgement of the interpretative nature of my analysis is credited in line with socio-cultural theory and my ontological and epistemological positioning.

Chapters 6 and 7 detail the SCDA I carried out in line with the themes I identified in the thematic analysis. Exemplars of transcribed data are used alongside detailed commentary to provide evidence to address the research questions set.

Acknowledgement of the way elements of the individual, other people, context and mediational means are interwoven within the dialogue is necessary. A procedure of foregrounding and backgrounding units of analysis is needed so analysis can consider individual units embedded in the bigger picture of the whole dialogue.

In Chapter 8, I draw together the previous chapters to consider the theoretical and practical contributions of this thesis. I consider how my interpretations extend

current theory in relation to dialogic theory; in particular how dialogic space has been explored in relation to parent-child interactions. I consider how this thesis could be read and interpreted by other practitioners working in similar early years education settings and how they may apply my interpretations to their own practice.

Chapter 2: Literature Review

2.1 Aims of literature review

The review of relevant literature aims to explore the theoretical benefits of the social construction of understanding and more specifically the co-construction of meaning between parent and pre-school child. It will examine the features of the existing literature investigating how parent and child interactions aid the child in task competence from a socio-cultural theoretical perspective. Empirical evidence of the co-construction of meaning in educational settings will be explored. Spaces for learning, and more specifically dialogic space, will be considered with a view to extending the concept to accommodate dialogues between parent and pre-school child. Search strategies were employed to yield the literature evaluated and synthesised in this chapter; these strategies are detailed in Appendix A.

2.2 Central tenets of socio-cultural theory

In this section, the central tenets of socio-cultural theory will be discussed: the importance of studying human action, the central mediational means of language and the social origins of individual development.

2.2.1 Human action: the focus of analysis

Socio-cultural theory considers the basic unit of analysis as the processes that constitute socio-cultural activity and not the properties of the individual. A fundamental tenet of socio-cultural theory is that what is being observed and explained is human *action* (Wertsch, 1991). Making human *action*, rather than the

individual or the *environment*, the focus of analysis allows an entry point into interpreting how individuals, others and their environment are entwined in the development of individual cognition (Rogoff, 1990). Secondly, perceiving the world from a socio-cultural theoretical viewpoint means accepting that nothing is static; rather, all aspects of human life change and evolve as time progresses (Cole, 1998). Human thought and language will change over the course of history and across culture but the history and culture in which thoughts and words are constructed will change as well. The social world changes both on a micro-scale of the interactions we are involved in as well as on a macro-scale of the world surrounding us (Cole, 1998). In this sense, the socio-cultural world is a paradox; our interactions are based in historically, culturally and socially specific worlds that we shape and change through our interactions with others. The constant shaping and re-shaping of social worlds consequently means that all action is situated within a specific social, cultural and historical time. The child's development becomes an apprenticeship in learning in their specific community (Rogoff, 1990), acquiring knowledge through mediational means and utility of appropriate cultural tools (Wertsch, 1991). Therefore, the child does not learn and develop in isolation but through social activities with other people. Within social activity interaction between individuals plays a central role in the child's development of thought and speech. This is discussed in the following sub-section.

2.2.2 The role of social interaction in communication, thought and speech

Vygotsky considered that social interaction plays a central role in the child's development of speech and thought. He saw the mediational means of language as

a crucial psychological tool for learning by constructing and re-constructing meaning. Vygotsky's argument that sign systems such as language, diagrams and arithmetic, play a mediating role in human action distinguishes his approach from many others (Wertsch, 1991). Vygotsky (1986) criticised previous research in the field of thought and speech due to the methods of analysis used and the lack of consideration of how word meanings develop. Vygotsky (1986, P.211) argues:

It would be wrong, however, to regard thought and speech as two unrelated processes, either parallel or crossing at certain points and mechanically influencing each other... The futility of most of the earlier investigations was largely due to the assumption that thought and word were isolated, independent elements, and verbal thought the fruit of their external union.

Vygotsky argues that considering thought and speech as two separate processes is bound to fail as neither the individual elements of thought or word separately possess the properties of the whole, combined unity. Vygotsky's theories provided a new approach, replacing the analysis of elements 'thought' and 'word', with the analysis of units i.e. 'word meaning'. Vygotsky argued that word meaning is an 'elementary "cell" that cannot be further analysed and that represents the most elementary form of the unity between thought and word' (1986, p.212). Thus, word meaning connects the two elements, thought and word, defining their interrelated qualities.

Vygotsky's (1986) work questions the assumptions upon which many previous theories were developed. He argues that they do not study word and meaning with any reference to development and evolution. Previous research often used

association theory in that 'the bond between word and meaning is an associative bond, established through the repeated simultaneous perception of a certain sound and a certain object' (Vygotsky, 1986, p. 212). Vygotsky argued that in adopting that perspective 'any development in word meanings is inexplicable and impossible' (1986, p. 213) as development of word meanings is reduced to changes in the associative connections between single words and single objects. Vygotsky argued that it is not just the content of a word that changes through historical evolution but the way reality is generalised and reflected in the word. In this view, words are historically, culturally and socially specific, changing and evolving over time.

By situating thought and word at 'poles of opposition' Vygotsky was able to highlight the problem with previous theories that considered thought and word in isolation (Wertsch, 2007, p.183). The two opposing terms, word and thought, have convergence in word meaning, thus linking them together in a unified way. This convergence of terms positions Vygotsky's theories of word and thought as a dialectic process. The dialectic process of meaning making is seen firstly on the social plane.

2.2.3 Social origins of individual development

In Vygotsky's (1986) conception of child development, the actual direction of development is from the social to the individual and not from the individual to the social. Vygotsky argued that child development is embedded in social interaction which is in contrast to other theories on child development that focus on the development of the individual, isolated child. Contrary to Piaget's (1959) theories that suggest that the route of maturation is though biologically supported, universal

changes, and Chomsky's (1968) innate development of language, Vygotsky (1978) argued that a child's development is socially formed and culturally transmitted in a complex *interlacement* between the biological and the social. From a Vygotskyian perspective, learning occurs twice on two separate planes. Firstly, learning occurs on the intermental plane of the social interaction between the individual child and another person. This learning is *then* internalised by the individual child into the intramental plane (Vygotsky, 1986). This process is termed internalisation. Vygotsky, however, did not assume the social, intermental plane and psychological, intramental plane were simple carbon copies of each other. Rather the child would take the learning occurring on the intermental plane, master it, internalise it and then be able to perform it on the intramental plane (Vygotsky, 1986). This highlights the importance of social interaction through dialogue.

2.3 What is dialogue?

In light of previous discussions of language, and in advance of exploring different conceptualisations of the role of dialogue in early child development, it is necessary to discuss what is meant by the ambiguous terms 'language' and 'dialogue'. Socio-cultural theory argues that language is a mediator, a means of interpersonal communication. Language plays a double role. It is both a psychological tool that helps other mental functions and equally, also one of these mental functions which as such undergoes cultural development (Vygotsky, 1986). Vygotsky (1986) considered dialogue to be oral speech as opposed to the monologue of inner speech and written speech. However, Bakhtin (1986) argues that dialogue is present within all forms of speech as they are made up of debate and multiple perspectives.

In this section the perspectives of dialectic and dialogic are explored before consideration is given to how different perspectives come together in dialogue.

2.3.1 Dialectic and dialogic perspectives on meaning making

A *dialectic* perspective on how language is used to create meaning considers opposing views of interlocutors to be set on a continuum with a connecting line that joins the two views together. Through dialogue, these opposing views migrate along the continuum line towards each other, meeting at a point of agreement. This point of agreement is never static; rather it is always changing, continually mobile, consistent with a historical, cultural and social constructed world (Cole, 1998). Vygotsky's theories of child development focus on the dialectic nature of dialogue. He suggests that understanding in higher mental functions is a convergence of dialogue into a monologue, thus unison is formed from the convergence of opposing views (Daniels, 2014; Wegerif, 2008; Wegerif, 2005).

A *dialogic* perspective questions whether dialogue can ever actually be merged into one single monologue. It takes the opposing view that it is the continuous debate in dialogue that challenges an individual's point of view and develops individual understanding. In determining what is meant by a dialogic approach I turn to the work of Bakhtin (1986, 1981). Bakhtin's work was not written directly for education pedagogy. However, many of his theories have relevance to understanding the role of dialogue in learning situations. Bakhtin is critical of the use of dialectic thinking. He suggests that dialectics are a stripped back and 'abstract' form of dialogue (1986, p.147), a 'continuous text' that brings closure to ideas (1986, p.162). Dialectic differs in form to dialogic as 'dialogic refers to the interanimation of real voices

where there is no necessary 'overcoming' or 'synthesis' (Wegerif, 2005, p.3). There will never be a convergence of ideas into one monologue as there will always be debate; thus dialogue. Wegerif (2011a) argues that it is this constant debate, dialogue, which constructs meaning through language. Therefore, in dialogic terms dialogues are constructed through difference.

2.3.2 Dialogues: Debating through difference

Dialogic inquiry has received attention from researchers investigating educational practice in formal education settings (Wells, 1999). The term dialogic is, however, multi-faceted and different researchers will focus on different aspects of dialogue in their investigations. These aspects include: the teacher's role in the classroom as co-inquirer, leader and organiser (Wells, 1995); making classrooms communities of inquiry (Wells, 1994) and collaborative learning in small groups (Littleton and Mercer, 2013; Mercer and Littleton, 2007). The specific area of dialogue I am focusing on is the constitutive difference between speakers (Wegerif, 2011a; 2010a). Wegerif defines a constitutive difference as 'where the difference between two identities helps to define the identities of the two things from within' (2010b, p.144). The constitutive difference between parent and pre-school child could present some specific features including the interdependent asymmetrical power distribution between them (Kuczynski, 2003). 'The assumption that power between parent and children is unequal or asymmetrical is fundamental to any understanding of parent-child relations' (Kuczynski, 2003, p.14). Power is unevenly distributed between parent and child due to the following three differences in their identity:

- The parent has vastly greater knowledge
- The parent has more control over resources
- The parent possesses physically greater strength

(Maccoby, 2000, p. 164)

However, the child also has a certain amount of power in the parent-child relationship. Both parent and child can have resources that they can draw upon in their relationship, including emotional attachments:

‘Transactions between individual, relational and cultural resources...are assumed to create novel syntheses in which even young children are routinely empowered in their utterances with parents and in which both parents and children are at times receptive and at time vulnerable to the others influence’

(Kuczynski 2003, p.15).

It is through dialogue that asymmetrical power relations exist, with interlocutors adjusting their authority dependent on their perceived intentions of the interaction (Cheyne and Tarulli, 1999).

Focusing on the constitutive difference between interlocutors will permit the exploration of how parent and child creatively use dialogue together when talking about colour and size. As defined in the Introductory Chapter, I adopt Wegerif *et al.*'s definition of creativity: ‘the unpredictable emergence of new perspectives in a dialogue where a new perspective is a new way of seeing the problem’ (2010, p.614). As discussed above, an important feature of dialogic is that meaning is not

based on the convergence of differing perspectives into a logical (or monological) point of view. It is in the eternal *difference* in perspectives that meaning exists. 'A dialogic perspective argues that education...takes place within dialogic human relationships in which students learn to see things from at least two perspectives at once, their own point of view and that of their teacher' (Wegerif, 2008, p.352-3).

Dialogic exists in the relationships that we have between us, the dialogue is not owned by either individual but is present *between* them. In entering into a dialogic relationship individuals must be willing to immerse themselves within the dialogue.

In a dialogic relationship, the speaker is aware of their own perspective and of the differing perspective of their listener, who in turn knows the speaker has a perspective that may differ from their own. Wegerif describes this model as 'inside out, outside in' in the sense that each individual is inside the thoughts of the other (2010b, p.26). Central to understanding dialogue through dialogic theory is the need to appreciate that it is not just the actual response that one receives from one's utterance that is important; it is the expected response to the utterance that shapes the way in which one speaks. One speaks in different utterances depending on whom one is speaking to, and also with an awareness of others that may be listening; therefore a speaker pitches his/her talk in relation to their audience. In order for a speaker to aim their speech at a particular person rather than speaking in the same manner to everyone there must be, within them, an image of their listener. It is for this reason that individuals speak differently to different people; one may be fairly relaxed and informal with family and friends but feel the need to speak more formally to a person in authority. Parents will pitch their speech to their

children in different ways, depending on the child's age and the parents understanding of their child's knowledge of the subject under discussion. In this sense, there are a multitude of talk tools available and the speaker will choose the one they feel most appropriate at the time (Wertsch, 1991). Consequently, it is from the listener's response that one's own response is planned (Stone, 1998). The role of speaker and listener alternate within the dialogue, thus speaker becomes listener and listener becomes speaker.

An essential (constitutive) marker of the utterance is its quality of being directed to someone, its *addressivity*... Both the composition and, particularly, the style of the utterance depend on those to whom the utterance is addressed, how the speaker (or writer) senses and images his addressees, and the force of their effect on the utterance

(Bakhtin, 1986, p.95)

Wertsch writes that in Bakhtin's theories the voice 'refers to more than an auditory signal' (1991, p.12) but is our character, individuality and perception that is not only spoken for ourselves but for our audience, or to use Bakhtin's (1986) term, addressee, and seeks an anticipated response from them. In accordance with Bakhtin's (1986) theories, there are always multiple perspectives in dialogue and thus there are multiple voices; meaning never consists of one single voice but will always be made up of at least two voices debating together. 'Meaning can come into existence only when two or more voices come into contact: when the voice of a listener responds to the voice of a speaker' (Wertsch 1991, p.52). The addressee in our utterance does not necessarily have to be a 'real' individual we are engaged in

dialogue with, the addressee can be 'an indefinite, unconcretized *other*' (Bakhtin, 1986, p.95, emphasis in original), meaning the addressee could be any one of an infinite number of existent or illusive audiences. Regardless of the authenticity of the addressee, the role of the intended recipient in utterance has a pinnacle function in Bakhtin's (1986) theories. Bakhtin argues that we cannot consider the individual word or sentence without regard to the utterance and its intended addressee as the two components are inseparable. Therefore, when a parent and child are speaking to one another, they are aware of each other in the interaction, and also are addressing their utterance *towards* each other. Thus, the way in which they talk together is purposeful to their interaction.

2.4 Dialogic relationships present in the origins of child's development

Rogoff (1990) argues that the social activity of communication takes for granted intersubjectivity between people, in that individuals have a mutual understanding, a common focus and some shared presuppositions that form the grounds for communication. Intersubjectivity can only be achieved when each individual understands not only what they bring to the joint activity but also what the other person is capable of contributing as well. This links to Bakhtin's (1986) notion of the listener being present within the speaker's utterance based on the speaker's prior knowledge of their listener. In dialogues between parent and child, the parent will often search for common reference points, translating the adult understanding of the situation into a form that he/she knows are within the child's grasp (Rogoff, 1990). The dialogue between parent and child becomes an *interaction* where each individual is jointly responsible for constructing meaning between them. Meaning is

not constructed through action or reaction, rather through 'joint action' between people (Gergen, 1999, p.145). '[I]ntersubjectivity between children and adults can be conceptualised in pedagogical terms as shared sustained thinking [where] children and adults build extended discussions of concepts and ideas' (Fleer and Hoban, 2012, p.61).

2.4.1 Mediated human action: The use of signs in dialogue

Vygotsky (1978) discusses how a basic signal-response structure is inadequate for understanding how humans learn to use higher mental functions. Instead, Vygotsky argues that another stimulus is present in the operation, that of a sign. Vygotsky defines a sign as 'artificial, or self-generated, stimuli' (1978, p.39). Vygotsky describes the use of the sign in the stimuli-response operation as a triangle, he states:

The structure of sign operations requires an intermediate link between the stimulus and the response. This intermediate link is a second order stimulus (sign) that is drawn into the operation where it fulfils a special function; it creates a new relation between S and R.

(Vygotsky, 1978, p.39)

The use of the sign separates Vygotsky's (1978) theories from previous work relating to stimulus-response operations. For Vygotsky the key to understanding stimulus-response operations in higher mental functions is the way 'language and other sign systems...are a part of and *mediate* human action' (Wertsch, 1991, p.29, emphasis in original). The sign is a connection between two or more individuals as

the sign is directed at a recipient and the recipient needs to firstly understand the sign and then interpret it in order for the sign to have meaning. The sign does not serve any purpose on its own; it only comes into significance in relations between individuals.

Wertsch (1985) applies and modifies Vygotsky' (1978) theories on mediated human action to present a theory on how very young children learn to point. During parent-child interaction the very young child learns that merely pointing at an object causes an action by the parent, namely picking up and passing the child the toy. Wertsch (1985) argues that it is the shift from using signs in an innocent way to using them in a purposeful way that the child develops an understanding of how to use cultural tools. Therefore, from a very early age the child is connecting with others in his/her social world and appears to have an awareness that their actions could lead to future actions; an inter-relationship between parent and child.

2.4.2 Learning from another person's perspective: Dialogic relationships

Hobson (2002) proposes an alternative view on the very young child's actions in pre-verbal development. He argues that if a very young child is presented with a new toy for the first time he or she may be a little cautious of it. This can especially be the case when the toy involves a certain amount of surprise, such as a 'Jack-in-the-Box' style toy. The child may be very apprehensive and not want to touch it. However, if an individual with whom the young child has a secure attachment, i.e. their mother, starts to play with the toy and smiles then the young child may be more willing to test it out for themselves. The child is watching the reactions of the mother and realising it is okay to touch the toy. The child is aware that the mother

has her own perspective on the toy and is influenced by the mother's perspective i.e. the toy is okay to touch. Hobson (2002, p.239) states:

She [the young child] has grasped that we each have a subjective perspective, a personal way of experiencing the world, that we can apply to things...Her new insight that people can have alternative takes on things has led to revolutionary changes in the form of her intellectual life.

Wegerif (2005) argues that, in this sense, even with very young children a dialogic relationship is present i.e. the child is seeing things from the perspective of another individual even before they are able to engage in dialogue verbally. For Wegerif (2005), there is a key difference in viewing learning and development from the perspective of learning to use cultural tools and learning to view the world from the perspective of others. Wegerif argues that 'mediation by cultural tools and dialogic relations are not...equal and reversible perspectives: in dialogues relationship precedes and exceeds tool use and is not reducible to tool use' (2005, p.207).

Mediation by cultural tools and dialogic relations are not equal because they are so diverse from each other that comparison is not possible. Despite their difference, one important similarity running in parallel in both Hobson's and Wertsch's accounts is the emphasis of the role of another individual in the young child's development. The child does not develop in isolation but within relationships with other people. Both of these theories highlight the importance of other people in the child's understanding of the world. The child's use of cultural tools *and* their understanding that others hold different perspectives to themselves are interwoven in the complex dynamics of social interaction. As the child grows older, she/he

begins to use the spoken word to interact with others in the process of meaning making. The following section will debate the role of language in meaning making.

2.5 Investigations into the role of language in meaning making

The way meaning is constructed between individuals, on the social plane, has been investigated through several different metaphors. Some investigations into meaning making concern themselves with the dominate role of other more knowledgeable partners guiding a learner through a challenging task; others consider how meaning is co-constructed in joint endeavour. In this section I shall debate the usefulness of the concepts Zone of Proximal Development (ZPD) and scaffolding when considering how meaning is negotiated between expert and novice. The concepts of the Intermental Development Zone (IDZ) and Intermental Creativity Zone (ICZ) are discussed as dialogic approaches to how individuals construct meaning together through dialogue.

2.5.1 The Zone of Proximal Development (ZPD)

Vygotsky (1986) argues that when investigating child development, we not only need to observe what the child can do independently but what the child can do with the support of a more experienced partner. Vygotsky argues if you have two children who are both able to solve problems designed for an eight year old to state the children are the same does not provide a full picture of each child's intellectual capabilities. This is because what the individual children might be able to do with the help of a more adept other may vary greatly. The first child may be capable of solving problems suitable for a nine year old with help, but the second child may be

able to solve problems designed for a twelve year old with help. The distance between what the child could do independently compared with what he or she could do with assistance offers a more complete picture of the child's intellectual ability; 'this measure gives a more helpful clue than mental age does to the dynamics of intellectual progress' (Vygotsky, 1986, p.187). Vygotsky calls this distance between what the child can do independently and what he or she could do with assistance from a trusted and valued partner the Zone of Proximal Development (ZPD). The child's stage of development will, however, restrict the amount of new knowledge they are able to acquire (Vygotsky, 1978).

The Zone of Proximal Development can be viewed as essentially creating a theoretical 'space' between the two individuals that opens up an opportunity to extend the learners understanding about a given subject, guiding the learner from the unknown to the known (Rogoff, 1990). Learning in the ZPD is described as the transfer of social control to self control in the task.

The development of any performance capacity in the individual also represents a changing relationship between self-regulation and social regulation.

(Tharp and Gallimore, 1998, p.98)

In life there are lots of opportunities for ZPD's to be created and the space of the ZPD will evolve as the learner's understanding of the subject changes. In addition, as certain skills are mastered old ZPDs will close and new ones will open (Tharp and Gallimore, 1998). The learner's thoughts are not a product of the individual; the

thoughts were not created in a vacuum but in the social, cultural world that the learner resides. The learner's voice, both in inner thought and external speech, is built up of multiple voices from within their social world (Bakhtin, 1986). In opposition to Piaget's (1959) view's on the young child's imitation of other's voices, Wertsch (1991) discusses how the voices of others are taken in by the individual and gradually integrated into one's own speech up until a point where the voice of the other and the voice of one's self are indistinguishable. Wertsch (1991) calls this 'ventriloquation'. Zones for learning within the ZPD do not have to rely on face-to-face interaction to be maintained. Vygotsky argues that when a child later comes to solve a problem similar to that the expert has taught him the child will imitate the expert to help himself solve the problem without the 'actual situation of collaboration' (1987, p.216). In this sense, to imitate means to draw upon the 'invisibly present' teacher in the child's thoughts (Vygotsky, 1987, p.216). The ability to tune into the 'voice' of a teacher from past experience presumes the presence of that voice within our own thoughts and links into Bakhtin's (1986) theories of voice. The teacher's voice within us, alongside our own voice, provides the multi-voiced perspective that Bakhtin (1986) argues is present within all of our thoughts. Daniels (2014) comments that the voice of the teacher and any other voices present in the dialogue may not necessarily be in agreement with each other; thus constructing the dialogical gap that that is secured on difference.

Despite Vygotsky (1978) strong views of the integral mediating role of language in the instruction and learning of the child, he was less clear on what the *processes* of interactions might look like (Wells, 1999). The metaphor of scaffolding has become

synonymous with the Vygotsky's (1986) Zone of Proximal development, with the first connection of the two terms being made by Cazden (1979). Investigations into scaffolding (discussed below in Section 2.6.2) utilise Vygotsky's (1986) ZPD in explaining how more experienced partners can assist novices in problems currently outside the learner's independent grasp, emphasising the asymmetrical power relation between teacher and learner (Cheyne and Tarulli, 1999). The ZPD is not fully adequate when considering how meaning is co-constructed through talk. Littleton and Mercer (2013, p.110) state:

the ZPD does not really capture the temporal, dynamic, dialogic nature of the process involved, whereby it is essential that teacher and learner(s) strive to build and extend a foundation of common knowledge to support their activities.

Littleton and Mercer's concerns highlight the dialectic nature of Vygotsky's theories on how the child can be supported by a more experienced other in achieving more than the child could achieve alone. There is a meeting point where the knowledge of the child and the expert other converge. In more contemporary research, theories have been proposed considering a more dialogic perception of how zones supporting learning may be constructed. These theories will be discussed in Sub-section 2.6.3, following a critical debate about the usefulness of the metaphor of scaffolding in explaining interactions between mother and child in problem-solving activity.

2.5.2 Scaffolding

Bruner (1978) developed the metaphor of scaffolding to describe how an individual can become very intimately and productively involved in someone else's learning; reducing the degrees of freedom necessary to successfully complete an activity, so that the novice is able to concentrate on the skill he or she is in the process of acquiring. An essential facet of scaffolding metaphor is the ability of the teacher to modify their instruction in line with the learner's moment-by-moment success or failure in the task; contingently shifting from more or less support dependent on the learner's immediate competence (Wood, Bruner and Ross, 1976).

2.5.2.1 Early studies into Scaffolding

There have been many studies in the field of maternal scaffolding over the last four decades; studies investigating how a mother's instruction supports their child in problem-solving activity. Early studies tended to focus on effective *maternal* behaviours in the scaffolding process. Wood and Middleton investigated the types of maternal behaviour that were most likely to help a child become an independent problem solver. Through their observations of mother-child dyads Wood and Middleton concluded that the mother's instruction was most effective when it was directed towards the child's 'region of sensitivity to instruction', which they define as being a hypothetical measure of the child's current task ability and their readiness for different types of instruction (1975, p.190). Children who were most likely to become independent problem solvers had mothers who adapted their instruction to their child's needs. Despite their early studies being criticized on numerous counts, in particular with relation to the lack of consideration of the

child's contribution (Elbers, 1996) and the absence of context from the immediate task and the setting (Gonzalez, 1996), the work of Wood and his team provides the basis for many other proceeding studies into how mothers support their child's problem solving activity.

Effective scaffolding is further described as the process where the mother's instruction is contingent with the child's performance on the task (Wood, Bruner and Ross, 1976; Wood and Middleton, 1975). In acting contingently the mother needs to calibrate her actions to the child's current capabilities. Wood (1988) refers to this process as *contingent shifting*. When a contingent process is followed it is the child's success or failure at any point in time that determines the tutor's next level of instruction (Wood *et al.*, 1976).

In theorising the concept of contingent shifting Wood and his team used an analytical approach of categorising and coding specific types of mother and child behaviour; thus the mother's intervention based on the child's success or failure in the task was analysed. This analytical approach has limitations on two counts. Firstly fitting human interaction into pre-determined categories is problematic as the fluidity and dynamics constituted in interaction are lost. This is an area of debate I shall give further consideration to in subsequent sections. Secondly analysing interaction through coding schemes does not allow for any consideration of the importance of the dialogue in its own right. When regarding child development through the framework of socio-cultural theory 'word' and 'word meaning' are jointly constructed *between* individuals through language. It is the notion of 'between' individuals that is crucial in encapsulating talk as a separate entity not

belonging to either speaker. The product of dialogue between individuals can be greater than the parts that make it up; thus the dialogue has a role in scaffolding the child's learning in its own right separate to the contribution made by either mother or child alone.

2.5.2.2 Research focusing on less effective scaffolding behaviours

Alongside identifying effective scaffolding strategies and emphasising the importance of scaffolding being a two-way dynamic, researchers have also investigated less effective scaffolding styles. Wood, Wood and Middleton (1978) observed that extreme swing patterns in the levels of instruction were an ineffective tutoring style. A swing pattern would consist of a mother alternating between extremes of instruction, for example the mother giving a general verbal prompt of what action to take next, immediately followed by the mother doing the task by herself. Meins (1997) extended the research of Wood and his team. In Meins' (1997) study the mother's sensitivity to the child's feedback was defined in terms of her ability to change the level of specificity of her suggestion in response to the child's ability to follow each instruction successfully, following Wood *et al.*'s (1978) 'contingency rule'. Meins, however, argued that in order for the mother to be acting contingently, she should only be adjusting her suggestions slightly in line with the child's success or failure. If the mother is to act contingently she should not be giving too much or too little support to the child; rather calibrating her action in line with the amount of support the child requires. Mothers who have a tendency to persist with the same level of instruction, even when their child is unsuccessful in a task are also less effective in their scaffolding behaviours. Carr and Pike's research, investigating the links between parenting style, maternal education and maternal

scaffolding behaviours, indicates that mothers who did not follow the contingency rule may use a 'fixed failure feedback' style (2012, p.549). Carr and Pike (2012) define fixed failure feedback as when the mother repeatedly gives the same level of intervention to the child after the child has failed to complete the task.

2.5.2.3 Effective instruction dependent on task and tutee

Wood *et al* (1976) argue that the actual pattern of effective instruction is both *task* and *tutee* dependent. Research investigating maternal instruction has stated that the mother will need specific knowledge of her child, the tutee, as she will need to be in tune with the child's current capabilities so she can modify and adapt her own behaviours and actions in relation to the child. As the child's task competence increases the mother's levels of intervention need to change in relation to the child's ever-changing independence. Research studies indicate that child competence on a task will increase with age and in effective scaffolding the mother's levels of intervention will decrease with the child's growing competence (Vandermaas-Peeler, Way and Umpleby, 2003).

Research studies investigating maternal scaffolding have also indicated the need for mothers to have specific knowledge of the task that she and her child are engaged in (Wood *et al.*, 1976). Having specific task knowledge, however, does not necessarily presuppose the mother is intentionally trying to teach her child in the traditional teacher-learner relationship that we would expect to see in formal environments such as schools and other educational settings. Rogoff discusses how much of the learning that occurs in everyday situations is coincidental:

In everyday interactions parents are not focused on instructing children, even in communities where schooling is emphasized. Everyday conversations that are not designed as instruction frequently provide children with important access to information and involvement in the skills of their community.

(Rogoff, 2003, p.283)

Differing styles of parenting have been debated since Diane Baumrind constructed a typology of parental authority styles in the early 1970s. In Baumrind's conceptual framework the separate elements of responsive and demanding parenting traits interact together to determine the differing parenting styles of authoritative, authoritarian and permissive (Baumrind, 2013). Other models of parenting style have been constructed specifically in relation to how parents and children interact together whilst engaged in problem-solving activity. As discussed by Hoogsteder, Maier and Elbers, there are various 'modes of interaction' that can be adopted in the problem-solving interaction and both mother and child are jointly responsible for constructing and re-constructing the path the interaction takes (1996, p.347). Thus, the traditional roles of teacher and learner *may not* be present in all mother-child relationships as 'the lived experiences of parents and children differ from conventional wisdom' (Kuczynski, Lollis and Koguchi, 2003, p.425). Wood and Wood (1996) address this criticism of their earlier work by agreeing that children experience different modes of interaction with their parents but question whether there is enough evidence available to determine whether these different modes have different developmental consequences for the child. Mercer and Littleton

neatly sum up this concern by stating: 'the expert or the tutor is not self-consciously trying to teach, or is not primarily concerned with teaching' (2007, p.19).

It is assumed the mother will need specific knowledge of the task so she is able to structure the child's involvement, guiding the child in the right direction to complete the task successfully. The mother must also have an awareness of what the child's presumption of the completed task looks like or the two could be fundamentally at odds from the beginning of the problem solving activity. Valsiner discusses this pointing out that: '[T]he goal orientations of "the guided" may in fact be directly contradictory to those of "the guider"' (2005, p.199). This aspect of scaffolding can in itself be problematic as a joint agreement needs to be established between the pair as to the aims of the task and what end-result is expected.

Research studies investigating maternal scaffolding are dominated by observing and analysing culturally-relevant problem-solving tasks that have a specific set of instructions for completion and are based on logic problems. The majority of these studies will use wooden block resources, replicating or modifying the original Wood and Middleton (1975) block task (e.g. Carr and Pike, 2012; Meins, 1997). Wooden block tasks have also been used in previous research investigating child concept development (Vygotsky, 1986). Lev Sakharov's method of double stimulation used wooden blocks of differing colour, shape, height and size alongside nonsense words (lag, bik, mur, cev) as a means of presenting the child with two sets of stimuli in an activity (Vygotsky, 1986). Sakharov's Block Test has been replicated in more recent research (Towsey, 2007) connecting experimental studies from several decades previous to contemporary investigations into the child's development of concepts.

The use of wooden block tasks enables researchers to observe how the child interacts with resources in their environment (human and contextual) in the completion of culturally-relevant tasks that have an expected conclusion. However, research findings suggest that the original Sakharov Block Test may not be a suitable for pre-school children due to the complexity of using nonsense words to aid thinking processes (Towsey, 2007). Other studies investigating the metaphor of scaffolding have observed pre-school children successfully engaged in culturally-relevant activities with care-givers (e.g. Vandermaas-Peeler *et al.*, 2003), suggesting that the task selected in investigations into interactions between pre-school child and carers is explicitly relevant to the behaviours observed. Thus, the task that dyads are involved in may have an impact on the scaffolding interaction between pre-school child and carer. In the next section I shall consider how interconnected elements of self, others, objects and environment could support a scaffolding interaction and consider the relevance of this to the scaffolding metaphor.

2.5.2.4 Moving towards a more co-constructive scaffolding metaphor

Mascolo (2005) argues that there are at least five elements which are all present and interconnected in scaffolding interactions by stating

Within a given *socio-cultural context*, *individual actions* are directed toward some physical or psychological *object*. In interaction with *other persons*, individuals engage dialogically using a variety of different *mediational means*, including signs, symbols and other cultural tools. From a coactive systems view, although these components are distinct from one another, they are inseparable as causes of individual action and development.

(Mascolo, 2005, p.187, emphasis in original)

From this short extract of Mascolo's (2005) work, he clearly identifies the five interconnecting areas that he considers vital in the scaffolding process; context, individual actions, object, other persons and the other mediational means of cultural tools.

According to Mascolo (2005) the element 'individual actions' demands more attention than many previous research studies (Wood and Middleton, 1978; Pratt, Kerig, Cowan and Cowan, 1988; Meins, 1997; Carr and Pike, 2012) have dedicated to it. Individual action means more than observing how the child receives the mother's tuition or acknowledging the active role of the child in the scaffolding relationship without fully considering their contributions. Elbers comments that the child's contribution to the interaction is often underrated in research into maternal scaffolding behaviours and emphasises that the social interaction that occurs is a co-operation between the pair by stating that 'even if the adult has the lead, the child's role should not be belittled' (1996, p.282). Mascolo discusses how the child's self-scaffolding skills should be considered, defining self-scaffolding as how 'products of the individual's own actions create conditions that direct and support the production of novel forms of action and meaning' (2005, p.193). From Mascolo's perspective self-scaffolding introduces to the scaffolding metaphor the truly active and dynamic ways in which the child will shape and drive the direction and pace in the pursuit of problem-solving activity.

The notion of self-scaffolding is further discussed by Bickhard (2005). He states that self-scaffolding is the transferable skills which children acquire and practice using in

order to become competent and independent problem-solvers; in essence it is *'learning to learn'* (Bickhard, 2005, p. 171). Bickhard (2005) does not regard these skills as innate but rather are learnt from the social world surrounding the learner, thus the skills of self-scaffolding are constructed through joint-endeavour. Tharp and Gallimore discuss the role of 'assistance provided by the self' in relation to the ZPD; they argue that an important transitional stage in gaining competence in a task is the ability to guide oneself through the task: 'What was guided by the other is now beginning to be guided and directed by the self' (1998, p.102). Mercer and Littleton also acknowledge that a subsequent stage of task progression following assistance provided by others is when 'the learner effectively takes over the role of scaffolder in relation to his or her own learning' (2007, p.17).

Other researchers, however, debate whether scaffolding should maintain its original status; that of external support. Turner and Berkowitz (2005) discuss how the inclusion of self-scaffolding strategies in the classification of scaffolding risks putting the characteristic identity of scaffolding under threat. They argue some of the processes being attributed to the notion of scaffolding are generic to many aspects of learning and not particular to the precise mechanism of structuring a child's success on a task through limiting variables until the child is capable of proceeding independently with that part of a task (Turner and Berkowitz, 2005). Mercer and Littleton also adopt this position arguing that:

The essence of scaffolding as used by Bruner and colleagues is the sensitive, supportive intervention of a more expert other in the progress of a learner who is actively involved in some specific task.

As many contemporary studies into scaffolding are based on Vygotsky's (1986) theoretical construct of ZPD it appears difficult to separate the notion of scaffolding by others and scaffolding oneself as the distinction between the two is not clear cut. Tharp and Gallimore write that the hand-over between social control and self-control 'is gradual, with progress occurring in fits and starts' (1998, p.101). With the distinction between social scaffolding and self-scaffolding being hazy it is difficult to distinguish whether contingent external support has resulted in the child's success or failure *or* the child's own attempt at self-scaffolding the activity. The presence of a verbal or physical prompt on the social plane need not necessarily be the motivation for the child's actions.

The debate of whether assistance provided to the learner *from* the learner in the form of self-scaffolding poses a conundrum for the metaphor of scaffolding.

Similarly the same conundrum can be applied to the other interconnecting elements that Mascolo (2005) identifies in his account of co-active scaffolding.

Likewise, the role of the relationship between parent and child is not considered in investigations into scaffolding. The parent and child are considered as individuals involved in interaction together with no regard of the existing relationship they share. Kuczynski, Lollis and Koguchi define a relationship as the 'past and future in the present' (2003, p.428) emphasizing that the interaction is not just about the 'here and now' of the situation but is interwoven into the dyads past history and future aspirations, the intersubjectivity shared between parent and child (as discussed in Section 2.5). It would, therefore, be of theoretical benefit to consider

the relationship of the parent and child within the contexts of the problem-solving activity rather than as an abstracted act of interaction between two individuals; context will be discussed in more detail in Section 2.7.2 and further elaborated on in Chapter 6 and 7.

If scaffolding is to remain in the perimeters of Wood and his colleagues' original definition it falls under criticism by other researchers regards lacking relevance to other elements of the social world such as self-scaffolding. If additional elements, such as self-, objects and context, are added to the definition of scaffolding then criticism is raised that scaffolding is becoming too distanced from its original roots. Rather than engaging in debate regarding the destiny of the metaphor of scaffolding; specific support offered by more expert others or an interconnected spectrum of self, other, object, context and other mediational means, one maybe better placed to investigate how other perspectives can provide new insight into mother-child problem-solving activity.

I argue that there is a gap in literature that scaffolding does not address; the co-construction of meaning between parent and pre-school child. In order to gain a deeper understanding of how parent and child interaction supports the child's *understanding* in problem-solving it is necessary to investigate ways in which the parent and child dynamic may support the child's thinking in a task and the co-construction of meaning. The difference in perspective is an area of teaching and learning that is not considered within the metaphor of scaffolding. Bickhard argues that investigations into scaffolding do not consider 'error-guided learning' (2005, p.167) whereby a representation of a situation is provided but may not necessarily

be correct. The reasons for an expert guiding a novice in error can be numerous yet difficult to know from the position of an observer: the expert may intentionally be trying to misguide the novice; the expert maybe playing devil's advocate trying to encourage the novice to think about the subject under scrutiny from a different angle; or the expert may believe their representation is correct even if it goes against the status quo. In the third instance, the expert believing their representation to be correct, the prior experience of the expert will construct how they perceive the subject; after all the expert was once the novice himself and learnt from the socio-cultural world that he is situated in.

As the origins of 'error', intentional or not, are difficult to ascertain in societies built upon multiple realities, new insight into the teaching-and-learning relationship (Rojas-Drummond and Mercer, 2003) between mother and pre-school child could be viewed through the lens of multiple perspectives; thus the difference that exists between individual opinion held together in tension in the dialogic space offers a way of exploring learning without the constraints of ownership of voice and intentional or unintentional misrepresentation. Therefore, to consider meaning making between parent and child through the lens of dialogic theory may offer theoretical benefit.

2.5.3 The Intermental Development Zone (IDZ)

In providing an alternative metaphor to scaffolding for informing my consideration of the role of language in meaning making I turn to the concept of the 'dialogic' (Wegerif, 2010a; 2010b). The 'dialogic' has not received a great deal of attention from researchers investigating problem-solving between parent and child. It is

essentially a concept associated with formal education and classroom-based learning. However, I do consider that the concept of dialogic has relevance to the role of language in meaning making between parent and pre-school child as it offers a consideration of the joint construction of understanding through dialogue, as I argue below.

Mercer and Littleton discuss the positive convergence of the research findings of their own research, Alexander's (2008; 2000) 'dialogic teaching', Nystrand, Wu, Gamorgan, Zeiser and Long's (2003) 'dialogic spells', Well's (1999) 'dialogic inquiry' and Brown and Palincsar's (1989) 'reciprocal teaching' in the way dialogic teaching is observed in classrooms. To summarise, Mercer and Littleton (2007) discuss that dialogic teaching can be describe in terms of classroom interaction in the following ways:

1. Students are given opportunities and encouragement to question, state points of view, and comment on ideas and issues that arise in lessons;
2. The teacher engages in discussions with students which explore and support the development of their understanding of content;
3. The teacher takes students' contributions into account in developing subject theme of the lesson and in devising activities that enable students to pursue their understanding themselves, through talk and other activity;
4. The teacher uses talk to provide a cumulative, continuing, contextual frame to enable students' involvement with the new knowledge they are encountering

The way dialogic teaching is described in the four points above characterises the relationship between novice and expert (in this case teacher and student). This is different to how investigations into scaffolding consider the relationship between parent and child in problem-solving activity. Rather than the emphasis being on how the expert adjusts their feedback to the novice's success or failure in a micro-aspect of the task (Wood and Middleton, 1975), dialogic teaching emphasises the freedom of the expert *and* the novice in the interaction, providing the novice with more agency in the direction of their learning. Secondly, in dialogic teaching the student is actively encouraged to *think* about the activity; a vital aspect of learning that is neglected in scaffolding literature. A teaching and learning relationship is about more than the transfer of facts (Scott, Ametller, Mortimer and Emberton, 2010); it is about the learner *engaging* with new knowledge. Thirdly, in dialogic teaching there is evidence of the expert and novice talking *together* about the activity rather than the interaction being a series of actions and responses. Talk provides a means of thinking together and learning how to think (Littleton and Mercer, 2013). The co-construction of meaning is an *inter*-mental process (Mercer and Littleton, 2007). In terms of education, the most important aspect of children talking through a problem either together or with an 'expert' may not be the answer they produce but the chain of dialogue they have progressed through; *interthinking* in order to co-construct to an answer (Littleton and Mercer, 2013).

Perspectives on how zones for learning are created and maintained adopting a dialogic approach to dialogue argue that the co-construction of meaning is not necessarily always about both individuals being in agreement with each other in

relation to the subject they are debating. Conflict in social cognition is a term more readily associated with Piaget (1932) than Vygotsky (1986) but some theorists argue that the combination and appreciation of both positions is desirable in understanding the child's learning (Brown and Palincsar, 1989). Piaget (1932) argues the need for the individual child to come into contact with a multitude of perspectives, including ones that differ from his own. The exposure of the child to differing perspectives results in a conflict between his own and the other persons understanding of meaning relating to the same subject. This conflict of opinions results in a 'disequilibrium' in the child's thoughts and exposes 'gaps' in the child's understanding that the child may not have considered before the conflict occurred (Piaget, 1932). Supporting Piagetian theories on the benefits of socio-cognitive conflict, Doise and Mugny (1984) and Perret-Clermont (1980) argue that the existence of conflict in dialogue prompts children to re-examine their own perceptions on the subject. However, conflict alone is not sufficient to explain how individuals co-construct meaning together within zones of learning. For cognitive development to occur conflicting perspectives need to be settled and some sort of resolution reached (Howe, 2010; Light and Littleton, 1999). The need for resolution as well as conflict suggests that consideration of disagreement alone is not adequate for explaining cognitive change; rather the resulting re-negotiation of ideas to accommodate conflicting points of view is more beneficial to learning than the disagreement in the first instance (Brown and Palincsar, 1989).

Mercer (2000) addresses the short-comings of the ZPD by conceptualising the Intermental Development Zone (IDZ). A space created through dialogue and joint activity, encapsulating a theoretical space that exists when two individuals, one who

is more knowledgeable in the subject than the other, create, negotiate and re-negotiate meaning jointly in a 'contextual frame of reference' (Mercer, 2000, p.171). Mercer's IDZ addresses the matter of dialogue not being a static unity but rather one which is constantly moving forward with meaning continuously being negotiated and re-negotiated during joint activity. It is the ever-progressing change in perspectives, brought together in dialogue that makes the IDZ a dialogic process rather than a dialectic one. Littleton and Mercer neatly describe the dialogic, dynamic and temporal nature of the IDZ as 'a track-laying vehicle that carries with it the resources for its own progress' (2013, p.110).

It would be incorrect to assume the knowledge that is shared within a sustained IDZ to be the simple transfer of information from expert to novice. Mercer states: 'any account of intellectual development based only on the guidance of young people by older members of their community would of course be inadequate' (2000, p.142).

The novice will have their own ideas of how they wish the dialogue to proceed, their own thoughts on 'correct' solutions to problems and may rebel against adult instruction. This is not only the case for individual dialogues but is how whole communities evolve over generations (Mercer, 2000). Within zones for intermental development, the novice and expert are doing more than transferring knowledge; they are co-constructing meaning together. The co-construction of knowledge requires the two individuals to think together through dialogue, they are interthinking (Littleton and Mercer, 2013). When thinking together both the expert and the novice need to be open not only to their own perspective but also to the perspective of others. Through the use of language and other modes of

representation, individuals can come together in dialogue to create a 'powerful problem-solving tool' (Mercer, 2013, p.151; Twiner, 2011).

It is not just within the dialogues of teacher and learner that the co-construction of meaning can occur. Peers of equal abilities can also use talk to reason between themselves, striving to find the best joint solution to a problem they have been presented with. Littleton and Mercer conceptualised the Intermental Creativity Zone (ICZ) capturing the 'collective creativity' of a group of peers (2013, p.111). The ICZ differs from the IDZ. The ICZ is less concerned with a teacher supporting a learner to achieve greater targets than the learner could manage alone and more concerned with how peers 'negotiate their way through the joint activity in which they are involved' (Littleton and Mercer, 2013, p. 111). Littleton and Mercer (2013) discuss how the space for collaboration is ever-changing and continually developing; a 'continuing event of contextualized, co-regulated joint activity' (Littleton and Mercer, 2013, p.111). The conceptualisation of ICZ is not only useful for groups of peers with equal abilities but could also be of relevance to situations where teaching is not the priority of the 'expert' in the dialogue. As discussed earlier the main reason for parent and pre-school child to take part in activities together may not be a teaching one (Hoogsteder *et al.*, 1996). There may be a multitude of other reasons why the two are engaged in the activity together:

- To have fun together
- Spend quality time doing things together
- Because they enjoy each other's company
- To pass time or relieve boredom

In the situations above the priority may not be for the parent to teach the child anything but this does not mean that the child does not *learn* anything. In investigating instances where individuals work together to co-construct meaning jointly without any necessary prior commitment for one to act as teacher and one to act as student my attention turns to the empirical research of peers working together in classroom settings.

Lyle (2002; 1993) investigated how school-aged children negotiate meaning through co-construction. Using the context of role-play within the classroom, Lyle (1993) reported that children will make provisional meaning as they proceed towards a shared construction of understanding of topics that are complex and multi-faceted and currently outside of their understanding. The child's understanding of the situation being acted out does not appear in the action or reaction of the characters; rather, meaning emerges through the relationship established between characters in the role-play, echoing Gergen's (1999) view of 'joint action' (Lyle, 2002). The co-construction of meaning in school-aged children has also been investigated by Maybin (1994). Maybin argues that in joint construction meaning is often 'provisional' and regularly 'contested' (1994, p.148). Maybin (1994) further argues that there is an ambiguity in meaning making whereby it is the listener, not the speaker, who interprets the words of the speaker creating meaning. In the course of their dialogue the roles of speaker and listener are exchanged and so is the interpretation. Roschelle and Teasley describe a joint problem space, a space that exists between learners and is created and maintained by 'co-ordinated production of talk and action' (1995, p.94). In each of the examples above meaning is co-constructed in a space between the individuals (or groups) engaged in

dialogue, thus meaning is not owned by either person rather it is provisional and frequently re-negotiated in dialogue.

If the speaker and listener's opinions were identical then the meaning co-constructed between them would not be negotiated and re-negotiated as there would not be a difference in points of view to be considered. Thus, each individual in the dialogue must hold a (slightly) different opinion on the meaning under construction. This produces a tension in the dialogue. Nystrand, Gamoran, Kachur and Prendergast (1997) argue that one's own opinions can have a change in direction when they are met by the opinions of another individual, with one refracting another. Therefore, either speaker may leave the dialogue with a (slightly) different perspective than when they entered the dialogue. In this sense it is being involved in the dialogue that has potentially changed the perspectives of either or both of the individuals.

The dynamics of negotiation between peers in the empirical research discussed above, and in parent-child relationships may be not be the same as the power asymmetry is different between groups/pairs of peers and parent-child relations (Kuczynski, 2003). Therefore, the way parent and child dyads interact in negotiation may not be the same as peers involved in the co-construction of meaning. Kuczynski Lollis and Koguchi assert that although parents have a power advantage over their children (discussed in Section 2.4.2), conflict and negotiation still occurs in the parent-child relationship; 'parents may deliberately underplay their power during conflict [offering] possibilities for perspective taking' (2003, p.431). In this sense, the parent may become emerged in dialogue with the child on a (temporary) more

even playing field, so perspectives can be negotiated in the co-construction of understanding. Furthermore, the child will hold a certain amount of power in the dialogue, through their own perspectives, which are unknown to the parent and can only be revealed during the dialogue.

2.6 Exploring mother and child problem-solving activity through the lens of dialogic theory

Within dialogue individuals can become immersed in debate. The contention between the two opposing perspectives creates space for debate that can, in turn, create new insights and understanding that promotes yet more thought. The space that is created in and through dialogue is described by Wegerif as a 'space of dialogue' (2010b, p.23). The space of dialogue does not belong to either individual, neither can take ownership of it, rather the individuals are drawn into the dialogue. The 'drawing in' of individuals into the dialogue requires us to question the individual's identities in relation to the dialogue in which they are engaged. In this section, I shall consider the identity of individuals in relation to the space of dialogue in the parent-child relationship.

2.6.1 Identifying with the space of dialogue

In order to understand individual identity in relation to talk I draw upon the research conducted in the Thinking Together programme (www.thinkingtogether.educ.cam.ac.uk). From their extensive observations of both teacher-student and student-student interactions in classroom settings Mercer, Littleton and colleagues identified three analytical categories to 'help us understand

how actual talk... is used by people to think together' (Mercer, 1995, p.104). These three categories are disputational talk, cumulative talk and exploratory talk. Each of the categories can be distinguished from the other two by the distinctive types of talk that are used. In disputational talk the interaction is typically characterised by disagreement, challenges and counter-challenges, assertions and short exchanges, leading to individual rather than joint decision making. Mercer (1995) states that in cumulative talk the individuals will construct common knowledge positively but uncritically together so the interaction will progress through repetition, confirmation and elaboration but crucially there will be no critical engagement on either part. In the third mode, exploratory talk, the interaction is typically characterised by the constructive and critical nature of the exchanges where ideas can be introduced, questioned and clarified allowing time for reasoning and justification of ideas.

The identity assumed by an individual in each of the three analytical categories differs. In disputational talk an individual is likely to assert the identity of 'self' or 'I'. They are likely to defend their own position and be unwilling to take on suggestions of others, thus maintaining their original perspectives and being unwilling to shift from them. The individual is not interested in the pursuit of 'truth' but motivated to prove they are correct and argue to support their own views; they are argumentative (Mercier and Sperber, 2011). Mercer argues that the style of argumentative reasoning described by Mercier and Sperber fails to acknowledge one of the most important functions of talk, the joint problem-solving activity that can occur between individuals. 'We do not use reasoning as an individual weapon to resist other people's agendas' but as a means of negotiating understanding

together (Mercer, 2013). The 'I' identity can be associated with the pre-school child engaged in dialogues in some theorist's work. Piaget (1932) argued that preschool children were unlikely to take into consideration the point of view of an adult due to the unequal nature of their relationship. Instead, the preschool child would maintain their own opinion on the subject despite the differing view of the adult. However, other theories suggest differently; Hobson (2002) argues that even very young children are able to take on the perception of an adult, as discussed earlier in relation to uncertainty regarding new toys.

In cumulative talk individuals will take on the identity of the group, so will strive to maintain a 'we' as opposed to an 'I' identity. Individuals will dismiss any perspective that could harm the 'we' status of the group. In cumulative talk conflict would not arise as it could damage the status quo of the group identity thus all individuals will maintain a collective opinion regardless of whether it is the 'correct' opinion or not. In many of the scaffolding studies, evaluated in Section 2.6.2 above, a 'we' identity could be assumed, The mother and child appear to be in agreement on the 'right' way to proceed with the challenging task under construction and the child appears not to question the adult's authority in the activity.

In exploratory talk, however, another identity is taken on in the dialogue. Wegerif explains this type of identity as non-self and he elaborates:

When children get carried away in the dialogue, they can challenge the group and even question their own positions. The features of successful problem solving in groups imply a different kind of identity position or

temporary identification: this is that of identification, not with any limited image such as self or a group, but with the space of dialogue itself.

(Wegerif, 2010b, p.23)

From this perspective, the concept of 'self' and 'other' must be left aside to consider individuals immersed inside a space of dialogue. It becomes irrelevant who brought which perspective into the dialogue. The purpose is to jointly construct understanding between individuals not to argue why one opinion is correct. 'The boundary between subjects is not therefore a demarcation line, or an external link between self and other, but an inclusive 'space' of dialogue within which self and other mutually construct and re-construct each other' (Wegerif, 2008, p.355).

A space for dialogue or dialogic space is a theoretical construct. Wegerif states 'the term space ...is a metaphor' (2011b, p.180). Wegerif's dialogic space is rather like Vygotsky's (1986) Zone of Proximal Development (ZPD) in that it does not exist in the sense that we can see it but is a psychologically created area between individuals in which opportunities for learning and understanding can occur. The dialogic space can never be measured like one could measure an objective space such as a car parking space or the space in a room. It is a temporary space created in dialogue that opens up the possibilities of new understanding and knowledge being constructed. Wegerif (2010a, p.311) describes this point more fully by stating:

The problem is that dialogic space is not a kind of 'thing' that one can identify with but more like a kind of relationship or a kind of 'difference', and not simply the easy kind of difference that one can see between two

things but a 'constitutive difference' that helps bring the things apparently in relation into being in the first place.

Wegerif emphasises his point further by stating "Dialogic Space' is more of a dynamic continuous emergence of meaning than a static 'space'" (2011b, p.180). A space of dialogue is created when both speakers and listeners are engaged in the interaction in such a way that they are able (and willing) to challenge both their partners chain of thought and their *own*. They are 'identifying in some way with the process of the dialogue itself and the ideal truth which it generates' (Wegerif, 2010b, p.23). Within the space of dialogue, the pair can challenge ideas critically and spontaneously create new ideas and thinking (Wegerif, 2010b). It is very unlikely that the perspectives of the two individuals would ever be exactly the same, nor would either know if this happened. The different perspectives are 'held together in a relationship of proximity' in the dialogic space; the dialogic gap that is created between opinion will never close as the opinions will never converge into a single point of view (Wegerif, 2011b, p.182).

Through engagement with the dialogic space, parent and child could debate concepts, constructing together an understanding of colour and size. The parent and child will bring to the dialogue a difference in their understandings of these concepts; a constitutive difference in identity that will provide a gap between their perspectives. The parent is expected to have more experience of the concepts of colour and size than the child but this is not to say that the child will not have worthwhile contributions to make. Consequently, a dialogic gap between the parent and child will exist and it is the gap between perceptions that promotes dialogue in

which meaning is co-created (Wegerif, 2011b, p.182). The dialogic gap between the parent's and pre-school child's perceptions could potentially be relatively large. The parent could have a far greater expanse of knowledge to draw upon in forming her perceptions than the child. The child may have relatively little experience of the problem-solving activity. The difference in knowledge will create a dialogic gap between their understandings that through dialogue *could be* debated, co-constructing meaning. The dialogic space, however, is a co-constructed arena for sparring ideas and opinions and thus can be broken down by either individual. Scott *et al.* (2010, p.290, emphasis in original) discuss how the dialogic meaning-making process can be eliminated in some teacher-pupil relationships in school-based science lessons by stating:

Problems can arise in teaching and learning situations when a teacher short-circuits the dialogic meaning-making process by addressing the authoritative epistemology of science through an authoritative pedagogical approach.

Thus the science teacher might argue that 'students need to be *told* the fact' and in doing so offers few opportunities for students to bring together different points of view, working with words and counter words.

The authoritative mode of teaching discussed by Scott *et al.* (2010) could be present in some parent and pre-school child dialogues. The relationship between parent and child can take different modes of interaction (Hoogsteder *et al.*, 1996) and not all parent and pre-school children will share a relationship that enables debate about meaning. Scott *et al.* argue that '[t]his fully-focused-on-the-outcome approach has minimal potential for making the links between ideas that underpin meaningful

learning' (2010, p.301). Thus, a parent style that is too authoritative may not be beneficial for the dialogic process of meaning making. However, as discussed in Section 2.3.2, interlocutors in dialogue can adjust their levels of authority (Cheyne and Tarulli, 1999). When learners are not told the facts but are given time to explore the ideas, Scott *et al.* state that the understanding of the concept under investigation can be deeper and more meaningful to the students as they 'come to understand not only what they [the concepts] *are* but also what they *are not*' (2010, p.301, emphasis in original). In this sense, the child can be supported to develop 'self-scaffolding skills' to understand a concept to a greater extent and be able to transfer these skills to other, similar, areas of learning (Bickhard, 2005, p.171) through a persuasive voice rather than an authoritative voice (Bakhtin, 1981). Thus, children who are able to co-construct meaning in a space of dialogue with their parent could have a deeper understanding of the concepts of colour and size than those children who are simply told the colour and size of objects without space for debate.

2.7 Situating dialogues: Moving beyond socio-cultural theory?

Wegerif states: 'I no longer think that the metaphor of learning to use cultural tools that the socio-cultural approach relies upon can understand the creative kind of thinking we learn through engaging in dialogue' (2010a, p.308). Wegerif argues that dialogic spaces should be viewed as more than a "mediating means' supporting cognitive development' rather the spaces of dialogue should be regarded 'as an end in itself' (2010a, p.310). This distancing of dialogic space away from mediational means creates a difference between the metaphor of dialogic space and the

previous theoretical constructs of Vygotsky's (1978, 1986) ZPD, Mercer's (2000) Intermental Development Zone (IDZ) and Littleton and Mercer's (2013) Intermental Creativity Zone (ICZ). The ZPD, IDZ and ICZ are concerned with conceptualising how a learner could be supported in achieving higher levels of cognitive development. Wegerif's theory of dialogic space emphasises 'the point of education is not to use dialogue to achieve something other than dialogue...but to enter more deeply and fully into dialogue' (2010a, p.310). From Wegerif's perspective, dialogue between individuals is considered to be the entirety; not a means of producing something else, rather the end product. Wegerif (2010a; 2007) argues that adopting this position moves his theories away from the socio-cultural framework, as talk is not considered a cultural tool in achieving things but is the outcome in itself. I dispute Wegerif's argument that dialogue is an end in itself on numerous levels.

Wegerif (2010b) asserts thought only occurs in relation to something, I argue this is also true of talk; groups of people do not simply talk, they talk about something. If there was nothing to talk about then talk would not exist. Wegerif (2010b) uses extracts of dialogue in his writing to illustrate the creativity in language. In these exemplars the children are all discussing something; thus, the talk revolves around a topic. The talk is not an end in itself; the talk is a means of getting something achieved. Talk is a process that has a desired goal or end point. The goal maybe continually evolving and shifting based on renegotiation and new understanding, *but* there will always be an outcome of the talk that has occurred. In a teaching and learning situation, this is potentially a change in the understanding the learner has about the subject in question. Thus, the theoretical spaces created in dialogue serve a purpose of providing opportunity to potentially shape meaning through dialogue.

Furthermore, to regard talk as an end in itself shows little regard for other modes of communication such as the mediational cultural tool kit (Wertsch, 1991). Wells states 'not all meaning is expressed lexicogrammatically – intonation, gesture etc also contribute to the meanings exchanged' (1999, p. 237). In referring to lexicogrammatical, Wells is drawing upon a term coined by Halliday to refer to the mutually interdependent nature of grammar and vocabulary. Twiner's (2011) research, embedded in socio-cultural theory, investigates how, despite talk being a central mode of communication, other modes of communication complement talk; arguing a multi-modal approach to talk is necessary. Subtle modes of communication within the dialogue, such as gaze, gesture and bodily location (Kerawalla, Littleton, Scanlon, Collins, Gaved, Mulholland, Jones, Clough and Blake, 2012) will all act mutually as the dialogue progresses. Bakhtin (1981) asserts that words and utterance should not be viewed as stand-alone features but need to be regarded in relation to utterance that proceeds and succeeds it; utterance is inseparable from utterance that surrounds it. Similarly, utterance cannot be separated from the other more discrete modes of communication that become 'part-and-parcel' to the dialogue. Thus, Wegerif's (2007, 2010a) view of dialogue as an end in itself is, in my opinion, not sufficient as it fails to recognise the purpose of talk, to achieve something, and does not consider the interdependent relationship of talk and other modes of communication within the dialogue.

Nevertheless, in his later work Wegerif appears to have a differing perspective on whether dialogue should be considered as an 'end in itself' than in his earlier work. This potentially signifies a potential u-turn in the usefulness of considering dialogue as an end in itself in educational pedagogy. In debating the identity of self or non-

self in the face of dialogue, Wegerif states it is self-ness, developing a unique perspective, rather than dialogue, that is an end in itself (2011a, p.85). Wegerif is debating the concept of dialogue as an end in itself from a fresh perspective that of the individual in the dialogue and what the individual gains from the dialogue i.e. responsibility. The pre-school child can be taught many everyday concepts by rote, through songs, rhymes and repetition. However, learning something by rote does not necessarily mean the child understands the concepts they are speaking of. A pre-school child may have been taught the colours of the rainbow by rote, but may not have any experience of what these colour names actually represent in real life. The pre-school child does not learn how to think about colour by being told what to say or through training in a parrot-like fashion (Wegerif, 2011a, Vygotsky, 1986). Rather, the child learns to think about colour in their situated context by engaging in dialogues with other individuals.

2.7.1 Situated dialogues: the role of resources in dialogic space

Wegerif (2011b) argues that dialogic spaces are viewed from two different perspectives; from those outside of the dialogic space and those inside the dialogic space. In Wegerif's opinion, dialogic spaces *are* situated in time and space when viewed from the outside *but* are not time and space specific when viewed from the inside. Wegerif (2011b, p.181) further expands on this point by stating:

If situation in space, time, culture and history is always constructed within Dialogic Spaces then it follows that Dialogic Space, is, in its essence, not so situated. Dialogic Space is, in a sense, the situation of situation

The relationship between the inside's and outside's view of dialogic space is paradoxical. Both views are 'bound up together' in the sense that word meanings brought into dialogues are always culturally and historically specific but the ways these meanings are interpreted and given meaning *within* dialogue is also culturally and historically situated (Wegerif, 2011b, p.180). This provides a possible evolution of word and meaning as meaning can be changed during dialogue. Thus, a word may not have the same meaning at the end of a dialogue as it did at the beginning of the dialogue: word meaning can change over time. Wegerif neatly describes this as '[a]lthough dialogues are always situated in history and culture it is also true that it is within dialogues that we interpret and give meaning to our history and our culture' (2010a, p.311). Thus, in Wegerif's (2010a) perspective dialogues viewed from the outside *are* situated but dialogues that are experienced from within *are not* situated. Wegerif (2010a) argues that dialogues experienced from the inside are not situated because through dialogue speakers and listeners can travel anywhere, and thus, are not confined to a situation.

Wegerif's argument that dialogic spaces are free from the constraints of social, cultural and historical connectives when lived from inside the dialogue does not convince me. Working from the perspective of socio-cultural theory, all human action is culturally mediated (Wertsch, 1991) through cultural practices (Rogoff, 1990) and I do not invest in Wegerif's argument that dialogic space is excluded from this. In some ways, Wegerif contradicts himself in relation to dialogic space being outside the realms of social, cultural and historical constructs. I will use the example of new media technology to illustrate this point, but contend that the point is generally relevant to all dialogue contexts.

Wegerif states that 'there are ways of using ICT in education that close down dialogic space and ways that open this up' (2010a, p.313). Wegerif proceeds to integrate ICT and the widening and deepening of dialogic space further by stating a 'singular affordance of new media technologies is the possibility of supporting new dialogic spaces anywhere and everywhere' (Wegerif, 2010a, p.313). I find the notion of dialogic space being free from socio-cultural constraints at the same time as being supported by technology contradictory. If new media technology has the power to widen and deepen children's learning without the traditional boundaries of time and space (Wegerif, 2010a) then the dialogic space itself is socially, culturally and historically constructed whether it is viewed from the inside or the outside.

Similarly, research studies investigating the co-construction of dialogic spaces within the classroom setting with school-aged children have focused on how artefacts, namely technology-based equipment, are utilised in creating spaces for productive thought. Wegerif (2011a) states computer-based technologies and the internet provide learners of all ages with an infinite scope of possibilities in opening, widening and deepening spaces for dialogic interaction. Wegerif discusses how 'mutually visible multimedia blogs' can create 'motivating shared reflective space' that help students to see issues from the perspective of other students and 'helps them to think and reflect and create new ideas' (2010a, p.318).

Hennessey investigated how the presence and effective use of an interactive whiteboard (IWB) in classrooms can 'help make explicit and create knowledge through opening up a (physical and cognitive) dialogic space in which new personal

and shared meanings can be negotiated' (2011, p. 483). Pifarre and Kleine Staarman (2011) conducted a study in a Spanish primary school to investigate how wiki platforms could provide space for children to discuss, negotiate and self-reflect on ideas using Webquest. Kerawalla (2015) investigated how specifically developed educational software (Talk Factory Generic) can be utilised in pupil-led whole class discussions to enable students to map their progress, refer back to previous work and scaffold future discussion. In each of these investigations the media technology provided to the learners has in some way shaped the dialogic spaces in which they are learning.

New media technology is socially, culturally and historically specific (Orlikowski and Baroudi, 1991); areas of social deprivation may be deprived of new technologies, developing cultures are not yet up-to-date with technology and phenomena such as Internet were unheard of five decades ago. The dialogic space will be shaped by the social, cultural and historical situation in which it is constructed as the example of new media technology demonstrates. However, despite the examples of new media technology being used to highlight how dialogic space is situated, the situated nature of dialogic space is not specific to new media technology; dialogues are always situated in a context.

Empirical research studies investigating dialogic space are situated within a context; context of investigation is an important aspect of studies approached from a socio-cultural framework. This poses another flaw in Wegerif's (2011b) argument that dialogic space is free from the constraints of time and space. Linell argues that 'words and utterances do not express or contain the meanings actors want to

convey in communication' (1998, p.127), linking to my point in Section 2.7, that talk does not exist alone, people need something to talk about. Linell (1998) argues that it is for this reason that dialogues need a context, or more specifically contexts. However, the concept of context 'is rather fuzzy, multi-faceted and hard-to-define' (Linell, 1998, p.128). 'Contexts have a characteristically *ambiguous status*, being both *outside of* and *integrated within* utterances and messages (Linell, 1998, p.134, emphasis in original). Context can be viewed as either the 'common-sense conception' of the 'more or less stable outside environment', or as *embedded within discursive activities* and *emergent* with discourse itself' (Linell, 1998, p.134, emphasis in original). Mercer (2000) argues that context of interaction is more than the physical surroundings, environment and resources but also includes the past shared experiences and common knowledge of the individuals engaged. Thus, the context of conversation will vary both between different individuals *and* from interaction to interaction as 'conversational partners build the contextual foundations for their own communication as they go along' despite the physical environment being unchanged (Mercer, 2000, p.25).

The use of a specific term devoid of explanation or the shortened sentence that does not need completion are only understood in the unique dialogues that they occur in and are made possible because the speaker and listener share the same social, cultural and historical ground (Vygotsky, 1986). Mercer views context as 'a mental phenomenon, and that it consists of *whatever information listeners ...use to make sense of what is said*' (2000, p.20) and Linell's view that 'contexts "only" comprise those contextual dimensions which stand out as salient or relevant to the actors' (1998, p.135) makes viewing dialogic space as free from contextual

constraints problematic, even from the *inside* of the dialogue, as the context of each dialogue will be unique and created *within* that dialogue. The foregrounding of contexts by actors in relation to dialogic space is further explored in Chapter 7.

If dialogic spaces were free from the constraints of the social, cultural and historical then every dialogic space would be the same. Nevertheless, every dialogic space is unique. As previously stated, there is a need to explore how the theories of dialogic space could be expanded to include the spaces for dialogue that occur between parent and pre-school child. If the dialogic space was free from the constraints of social, cultural and historical interconnectives then this research would not be necessary as all dialogic spaces would be constructed the same regardless of context. But, dialogic spaces are constitutive of dialogue and constituted by dialogue, and the dialogue is a product of the socio-cultural world in which it exists. Dialogic spaces between parent and pre-school child have the potential to be different to dialogic space previously investigated within classroom settings of formal education establishments with school-aged children.

2.8 My contribution to the research literature

From the literature I have reviewed and synthesised in this chapter the overarching principle, regardless of the specifics of individual theories, is that meaning making occurs between individuals on the social plane of learning. Even from a very young age, the child develops through social interaction with members of her community, learning to use cultural tools (Wertsch, 1991; Vygotsky, 1986) and to perceive things from the perception of others (Hobson, 2002). Language plays a principal part in how meaning is constructed on the social plane, acting as a mediator *and* higher

mental function simultaneously (Vygotsky, 1986). It is through language (and other mediational means) that young children learn how to use language for social and private speech and for making sense of the world that surrounds them. Some theorists view learning through language and other mediational means as a top-down process whereby knowledge is passed down (and altered) through generations (Rogoff, 1990). However, I have approached this thesis from the perspective that learning through language is a process of co-construction, whereby meaning is negotiated between individuals (Littleton and Mercer, 2013).

Studies investigating parent and child problem-solving activity are embedded in the notion of adult support and guidance, broadly situated within the metaphor of scaffolding (emulating from Wood and Middleton, 1975). However, the theoretical perspective that meaning is co-constructed between individuals during joint endeavour has received less attention from researchers investigating parent and child problem-solving activity. I intend to contribute to literature by addressing this gap and researching the co-construction of meaning between parent and pre-school child whilst engaged in problem-solving activity.

There are various theoretical 'zones' that describe the space in which a learner is most likely to advance in their understanding of a particular subject. Vygotsky's (1986) ZPD and other theoretical zones that take a more dialogic view of learning (Mercer, 2000, Littleton and Mercer, 2013) have been debated. I have chosen to situate my study within the concept of dialogic space (Wegerif, 2010a). Dialogic space has received attention from researchers investigating dialogic classroom-based learning but, as yet, the concept has not been adapted and extended to

accommodate mother and pre-school child dialogues. I have been critical in my evaluation of Wegerif's (2010a) dialogic space in this literature review and I do not readily accept all of Wegerif's theoretical arguments. I do, however, consider the concept of dialogic space ripe for development within the context of mother and pre-school child problem-solving activity. The rest of this thesis is dedicated to the planning, collection and analysis of data to explore the theoretical dialogic space in the context outlined above.

The overarching research question addressed in this thesis is:

Can dialogic space be opened, deepened and widened during parent-child dialogues that focus on discussing the concepts of colour and size?

In line with Wegerif, I define opening up of creative dialogic spaces as 'asking questions and listening with respect to others'; deepening of the dialogic space as 'a form of 'deconstruction' insofar as this means consciously exploring the key distinctions that frame constructions of meaning in order to become aware of how things might be otherwise'; and widening as 'increasing the degree of difference between perspectives in a dialogue while maintaining the dialogic relationship' (2010a, p.313-4).

From this overarching research questions I have two sub-questions:

- i. Can current theorising on dialogic space be utilised to understand joint meaning-making processes involved during dialogues between parent and child that focus on discussing the concepts of colour and size?

- ii. Can early years practice be enhanced by a better understanding of the child's role in the co-construction of knowledge during dyadic interactions that focus on the concepts of colour and size?

In the next chapter, Methodology, I shall discuss my ontological and epistemological beliefs, alongside the research approach selected to address my research questions.

Chapter 3: Methodology

3.1 Introduction

Drawing on the sociocultural theoretical approach that I discussed in Chapter 2, in this chapter I outline my ontological and epistemological positioning and approach to this research study. My ontological and epistemological positions shifted during the course of this doctorate as I engaged with literature and empirical research. I begin with positioning my research in ontological terms in relation to sociocultural theory. This leads on to my epistemological positioning which is guided by sociocultural theory. Following this I review the, at times, conflicting literature and definitions of the case study approach. I go on to discuss the way I have employed a case study approach which leads into a consideration of the methods of data collection used. In this way I make the relationship between my ontological and epistemological position, case study approach and research questions clear to my audience.

Evaluating literature has highlighted that research methods and methodologies do not have set definitions and strict boundaries. Grix states it is 'hardly surprising that students rarely have a firm grasp of the tools of their trade' considering the variety of uses of terms and terminology in social science research (2002, p.175). My comprehensive search of literature regarding methodology in educational research found a series of competing views on the *correct* way to conduct a study in education. The often opposing views of various authors on the appropriate methodology to follow have left me with the understanding that methodology in

itself is a subjective aspect of research. Researchers will choose the methodology, research paradigm, approach and methods that they *believe* is the most suitable for answering the research questions they have posed (Guba and Lincoln, 1994). They make this assessment, based on informed judgement, in accordance with the theoretical background of the research. An acceptance that there are no strict boundaries between paradigms, approaches and methods was also necessary when locating my study in my chosen methodology. Boundaries between apparently opposing quarters can in fact be merged in a single research study (Guba and Lincoln, 1994).

3.2 Ontology

For many researchers a prerequisite to carrying out research is the desire to find out the truth regarding the phenomena under investigation. The truth, however, is difficult to achieve and debates regarding true knowledge are widespread in the research community (Waring, 2012; Hammersley, 2007). Methodological concerns will often be centred on an individual's view of the nature of reality – ontology; and how they know about it - epistemology. Waring (2012) discusses how the starting point for all research is the researcher's ontological conviction followed closely by their epistemological beliefs. A methodology is adopted and appropriate research methods considered from these starting points (Waring, 2012; Guba and Lincoln, 1994). This process is reiterated by Grix (2002), who views ontology, epistemology, methodology and methods as interrelated components that will follow a logical pathway in the research process. To elaborate further, Guba and Lincoln define ontology as the researcher questioning 'What is the form and nature of reality and,

therefore, what is there that can be known about it?' They describe epistemology as a question 'What is the nature of the relationship between the knower or would-be knower and what can be known?' (1994, p.108). As is clear from these two questions, the researcher's ontological beliefs and epistemological convictions are interrelated and will follow from one to the other as a natural progression.

Ontological beliefs can be viewed as a continuum with the strongest realist opinions at one extreme and the strongest constructivist judgments lying at the other end (Waring, 2012). Realists believe in single realities or truths that exist in the world free from time and contextual constraints. Constructionists, on the other hand, believe in multiple realities constructed in time and place by individuals (Waring, 2012). There are many researchers who position their ontological views somewhere between these two extremes. My ontological position leans towards the constructivist end of the continuum. At the beginning of my doctoral journey my ontological beliefs were that social actors create and re-create realities and that these realities could be different in different times and contexts. As I have evaluated various accounts of how individuals negotiate and create meaning in the texts that I have read, my original ontological position has been challenged slightly. I now place far more relevance upon the dialogues within which individuals debate, challenge and construct meaning. My ontological position has not moved from the constructionist end of the continuum but my beliefs about how meaning is constructed between individuals has been shaped by Wegerif's (2011b) conceptualisation of dialogic space.

3.2.1 Establishing dialogic space in ontology.

Wegerif states that 'the concept of Dialogic Space is not just an idea but is pointing to something real that can help us understand how we think and how children learn to think' (2011b, p.182). Stating that dialogic space is 'real' is thought provoking.

During my reading of Wegerif's theories on dialogic space I had interpreted his work to mean that the dialogic space was a domain in which individuals constructed realities through difference. Thus, meaning was the reality constructed within dialogue. In my interpretation the dialogic space only existed in the same sense as Vygotsky's (1986) Zone of Proximal Development (ZPD) or Mercer's (2000)

Intermental Development Zone (IDZ) exist i.e. that of a theoretical concept that can help us understand how meaning is constructed between individuals. On reflection, however, I recognise Wegerif's point about dialogic spaces having their own reality.

If the dialogic space is considered from the insider perspective, from the point of view of those engaged in the dialogue, it is a space where meaning is constructed through challenge, debate and difference in the dialogic gap; thus the dialogic space is something separate to the realities that are created within it. Wegerif states that the dialogic space is the 'situation of situation', therefore excluded from the constraints of social, cultural and historical connectives (2011b, p.181). If the dialogic space is considered from an outsider perspective, it is a reality, in the same sense that all meaning that we construct jointly is a reality (Gergen, 1999; Neuman, 1997). Dialogic space is constructed into a reality within the dialogues that it is spoken or written about. Through having debate about the existence of the dialogic space, it is made a reality i.e. the dialogic space is constructed in and exists in dialogues both between and within individuals.

Dialogic theory also presupposes an ontological status. Wegerif's dialogic perspective asserts that dialogue is considered as more than a tool *for* learning, rather the dialogue is seen as a means in itself:

In my ideal view of 'teaching' learning to learn through promoting dialogue as an end in itself is the most distinctive and important contribution that a dialogic perspective brings to the debate about education.

(Wegerif, 2005, p.211)

From this perspective, dialogue is not just present to teach a specific concept that is under discussion at the time. Being dialogic is about learning to think through taking the perspectives of another person and challenging one's own thinking. The notion of talk as an end in itself was debated in my literature review where I contested Wegerif's view on the entirety of talk. I favour the view that talk, as a process, enables us to achieve something within socio-cultural contexts, which is more in keeping with socio-cultural theory. Establishing one's ontological views has implications for the epistemological approach that follows them. This is discussed in more detail below.

3.3 Epistemology

Waring (2012) suggests that the second consideration when starting any research is the researcher's epistemological beliefs. These logically follow the researcher's ontological convictions so realists tend to follow positivist epistemologies to gain certain knowledge through observation, manipulation and measurement, whereas constructionists tend to follow interpretivist epistemologies investigating

phenomena in historical, social and cultural situations and from perspectives of individuals (Grix, 2002). My epistemological position is that of interpretivism as I believe, following on from my ontological convictions, that the researcher and the research are interconnected and findings from my research will be constructed as my research progresses (Waring, 2012). The literature I have reviewed, the study I have designed to answer my research questions and the analytical tools I have employed will all shape the research that I carry out. Thus I am an integral part of the research as I (partly) construct the social realities that I engage in (Guba and Lincoln, 1994) and cannot be separated from them. As an interpretivist researcher I agree 'that reality, as well as our knowledge thereof, are social products and hence incapable of being understood independently of the social actors (including the researchers) that construct and make sense of that reality' (Orlikowski and Baroudi, 1994, p.14). I believe that a 'quest for universal laws leads to a disregard for historical and contextual conditions as possible triggers of events or influences on human action' (Orlikowski and Baroudi, 1991, p.13). Thus, realities are constructed between individuals on a local and contextual level (Guba and Lincoln, 1994) through the mediational means that they share (Klein and Myers, 1999).

3.3.1 Epistemology of 'dialogism'

Acknowledging that meaning is constructed between individuals *through* dialogue has resulted in a change in my epistemological beliefs. I started my doctorate journey with the assumption that knowledge was transferred from a more experienced individual to a less experienced individual through social practices (Cole, 1998; Rogoff, 1990), within the learner's ZPD (Vygotsky, 1986). The

development in my understanding of meaning-making and my position on how meaning is constructed has been particularly influenced by Linell. Linell discusses how dialogism is not one coherent theory or school of thought, rather it 'is a name for a bundle, or combination of *theoretical and epistemological assumptions about human action, communication and cognition*' (2003, p.2, emphasis in original). Linell (2003) states there are three assumptions upon which dialogism as an epistemological framework is based: interactionism, contextualism and communicative constructionism. I will summarise each assumption briefly below:

Interactionism: Interactions rather than utterances are the basic constituents of discourse; it is the way individuals interact together and exchange spoken language that is important and not the abstracted utterance of a single speaker. The way the speaker and listener interact together is interdependent and cannot be separated.

Contextualism: discourse happens within a context; the discourse is interdependent with the context and thus the two are inseparable. The discourse would not hold the same meaning without the context just as the context would not be the same in the absence of the discourse.

Communicative constructionism: dialogue is more than the transfer of our ready-made thoughts from one individual to another; it is within our communication that we construct meaning, within our social, cultural and historical worlds.

(based on Linell, 2003, p.2)

Based on Linell (2003), I now consider that meanings are not only formed, transferred and used but also negotiated between individuals through language and other mediational means in situated interactions resulting in an ever-changing reality. That reality is not fixed but constructed and re-constructed between individuals. The dialogue that is shared between two people does not belong to either of them and is more than either individual could create alone. Dialogue between individuals is greater than the sum of the two parts that make it up because shared meaning is constructed through dialogue (Mercer, 2004).

Adopting an interpretivist epistemology does not necessary assume that qualitative research will be followed. As Klein and Myers state 'the word interpretive is not a synonym for qualitative' (1999, p.69). Qualitative is a term that 'ought to be reserved for a description of types of methods' (Guba and Lincoln, 1994, p.105) and is not an epistemology. This is not to say that interpretivist researchers will not employ qualitative methods of data collection and analysis, as Guba and Lincoln (1994) explain the methodology is constricted by the researcher's epistemological convictions. Rather, the two terms interpretivist and qualitative are not interchangeable (Neuman, 1997); thus in this thesis my epistemological positioning is interpretivist and my research methods (discussed in Chapter 4) are largely qualitative.

Establishing sound ontological and epistemological positions provides the basis for a researcher to think about how they will go about acquiring the knowledge they desire to inform the phenomena under investigation, thus securing their methodology and research paradigm. Based upon my beliefs that internalisation of

meaning constructed on the intermental plane (Vygotsky, 1986) through interthinking (Littleton and Mercer, 2013) within an arena of dialogic space (Wegerif, 2011b) I adopt the following position. Meaning is not transferred between individuals as a carbon-copy (Mercer, 2000; Bakhurst, 1986; Vygotsky, 1986) but is co-constructed and negotiated through dialogue. These beliefs have shaped the research paradigm in which my study is situated.

3.4 Research paradigms

Paradigms in relation to educational research are defined by Burgess, Siemeniski and Arthur as 'a set of beliefs that deal with ultimates and first principles' (2007, p.54). Coe also suggests that a research paradigm unites researchers in their beliefs because a paradigm is 'shared by groups of researchers who adopt the whole paradigm as the one true way and defend it in opposition to any other set of views'(2012, p.5). There are several paradigms within the study of educational inquiry. Burgess *et al.*(2007) state the main paradigms are positivism, post-positivism, interpretivism, critical/constructivist and postmodernism. The research paradigm will follow the core ontological and epistemological beliefs of the researcher and will influence how a researcher approaches their investigation. Hammersley (2007, p.1), however, is not convinced of the uniqueness of each paradigm and argues that the fragile boundaries between paradigms make it impossible to produce a conclusive list of paradigms:

it is not possible to give a definitive and exhaustive list of paradigms, because...[of] the same term being used in somewhat different, and sometimes very different, ways on different occasions.

Coe suggests there is a middle ground between these two opposing views on the boundaries of paradigms by stating that 'although allegiance to a particular 'paradigm' may be a fundamental commitment for some, others can see the merits of both sides of an argument about opposing views, and may be willing to move between positions and back again' (2012, p.5).

Studies conducted within each paradigm will vary in the questions asked, and how and why data is collected and analysed to answer these questions. Debate about which research paradigm is most suitable for educational research centres mainly on the question of how we collect and analyse data about human behaviour.

Supporters of a positivistic paradigm believe that methods of data collection and analysis used in the natural sciences are most effective in measuring human behaviour. Studies emerging from a positivistic position will have a central interest in observing outcomes and limiting variables. Researchers adopting an interpretivist position, however, will argue that human behaviour is not the same as natural sciences and thus research needs to be approached from a different angle. A researcher adopting an interpretivist paradigm may be more interested in studying the processes involved in a phenomenon rather than investigating pre-determined outcomes. The interpretivism paradigm still remains in sharp contrast to the positivistic position of the natural sciences but other research paradigms, such as post-positivism will combine positivist and interpretivist research methods and techniques in answering their research questions. A critical/constructivist paradigm will seek to challenge previously held views in research by providing alternative perspectives, such as feminism. Finally a postmodernism paradigm will approach research from the point of view that grand theories may not be as suitable for

explaining phenomena as more localised, contextual narratives specific to individual cases (Burgess *et al.*, 2007). The research paradigm chosen by a researcher will not only position them philosophically but will have profound implications for the type of research they conduct (Burgess *et al.*, 2007).

In the next section, I shall discuss my decision to align myself to the interpretivist paradigm not only in relation to conducting my research study and answering my research questions but in relation to the contextual setting of my study and my professional relationship with my participants.

3.4.1 Interpretivist paradigm

I have chosen to situate my research within an interpretivist paradigm, consistent with my ontological and epistemological beliefs. My choice of an interpretivist paradigm has inevitably meant that I have considered and dismissed other research paradigms. I feel my justification for not choosing a positivistic paradigm is clearly set out above in Section 3.3.1; however, there are other research paradigms which deserve consideration. Feminist paradigms can be used by researchers investigating educational matters but I did not feel this paradigm was right for my research despite my own gender as I am not researching issues embedded in politics, gender, racism or oppression. A postmodernism paradigm would not be suitable for my research study as my research questions are deeply embedded in fundamental theories of concept formation, namely socio-cultural theory, Vygotskyian interpretations of child development and Wegerif's (2011b) dialogic theory. I intend to add to existing knowledge in this area through my observations, findings and

conclusions rather than drawing attention to ‘permeable and moveable’ boundaries in previous theory (Burgess *et al.*, 2007, p. 55).

My choice of research paradigm initially lies in my belief that human behaviour is socially, historically and culturally specific and realities are socially constructed.

Attempting to measure human action using methods derived from the natural sciences is fundamentally flawed. Human behaviour cannot and should not be controlled in the same way as variables in a scientific experiment. My reasons for adopting this paradigm are further reflected in the research question I have set myself, the context of my research and my role as a practitioner-researcher.

Ultimately I am interested in investigating *process* rather than *outcome* which is reflected in my research question and the sociocultural theory in which my research is set. Wegerif argues that dialogic theory presents a radically different way of investigating how children learn to think because it is ‘entirely described in terms of the quality of relationships without reference to ‘cognitive structures’’ (2011b, p.179). Adopting a dialogic perspective means I am not concerned with investigating cognitive change in the pre-school child’s conceptual development – ‘the outcome’- rather, I intend to investigate the dialogue that occurs between mother and child in concept-focused activity – ‘the process’.

At the start of my research study I did not have any pre-determined hypotheses regarding the dialogic relationship between mother and child. Instead, my inquiry is exploratory in nature as I intend to explore how dialogic spaces are created and maintained in mother and pre-school child relationships. For this reason an interpretivist paradigm was desirable (Guba and Lincoln, 1994). An aspiration to

gather and analyse rich, in-depth data, positions my study in an interpretivist paradigm with qualitative approaches to data collection (Creswell, 2007).

The context in which I have carried out my research has also influenced my decision to adopt an interpretivist paradigm. My research has been conducted in what Robson describes as the messy, poorly controlled and complex 'real-world' as I have conducted my study in my workplace with parents and their pre-school children (1993, p.2). Attempting to control variables in such a situation, or provide laboratory-type conditions, would be virtually impossible and most undesirable in my study, thus making positivist research problematic. I have opted to conduct an overt study by being completely open with my participants, colleagues and other members of my profession regarding the nature and intended outcomes of my research. I acknowledge and relish the fact that my research is situated and specific to my workplace. I intend this study to be an honest account of a social and cultural reality rather than a universal truth (Guba and Lincoln, 1994).

My role in this research study is that of a practitioner-researcher conducting research in the familiar setting of my workplace. Pursuing this type of research inevitably means I am subjectively rather than objectively involved in the research. It would be unrealistic to assume that I am able to stand back and observe as an objective onlooker as I am too professionally intertwined with the research setting and research participants. I do not, however, consider this to be a limitation of my research because my insider knowledge has aided me greatly in planning, designing, conducting and analysing my study. I disagree with Diaz-Andrade (2009) who asserts how researchers are a vehicle for revealing realities. In interpretivist

research the researcher is far more than a vehicle, a soulless piece of equipment for transporting others' realities. Instead, the researcher is an integral part of the process, developing a persuasive argument about how reality is constructed (Guba and Lincoln, 1994).

3.5 Research approach

Alongside positioning my research within a research paradigm I also needed to situate my study in a research approach. Again I have found discrepancies in relation to this part of my methodology with some authors using the terms 'approach' and 'methods' when speaking of the same process. For example Yin (2009) refers to case studies as a research *method* whereas Burgess *et al.* (2007) refer to case studies as a research *approach*, thus signalling that these terms are difficult to differentiate. Burgess *et al.* (2007) state there is three main types of research approach in educational research. These are case study, action research and surveys. As with the research paradigm, the approach adopted in the study will have profound implications for the type of data collected, how it is analysed and the conclusions drawn. I have chosen to adopt a case study approach in my research. Below, I begin by introducing the case study approach and then offer justifications for my decision.

3.5.1 The case study approach: Background

When considering the case study approach in relation to an experimental approach or a social survey, Gomm, Hammersley and Foster state: 'usually 'case study' refers to research that investigates a few cases, often just one, in considerable depth'

(2009, p.3). It is this definition of the case study that I intend to adopt. Gomm *et al.* (2009, p.3) then follow on to state: 'case study researchers construct cases out of naturally occurring social situations' rather than the researcher creating the case(s) in experimental studies. The notion that cases are constructed within a context or frame of observation is consistent with my theoretical background and my ontological and epistemological positioning in this study.

My rationale for choosing a case study approach is informed by the work of Yin (2009) who states that it is particularly relevant for asking 'how' and 'why' research questions. This is the situation of my inquiry. Case study research is especially applicable when the researcher requires extensive and in-depth evidence to answer their research questions which describes the type of data I require to explore dialogues between parent and child. Yin (2009) states that: case study research is relevant for investigating contemporary rather than historical events. This is also the case in my research study as I am investigating a social phenomenon occurring in the present, with the prospect of extending previous theory in dialogic space literature. Finally, Yin (2009) proposes the use of case studies when the researcher does not have complete control over the social situation under investigation. Again this aspect of case study research is relevant to my study. Due to the very nature of human interaction, I have very little control over how communication proceeds between parent and child. For these reasons I believe the case study approach is most suitable for my inquiry.

3.5.2 Interpretivist case study

A case study can be utilised in positivist or interpretivist research epistemologies (Robson, 1993). Case study methods 'allow for a certain degree of methodological eclecticism' (Day Ashley, 2012, p.103) including observing social situations and asking questions of it (Bassey, 1999). Stake (1978, p.7) states the style of approach taken in case studies as follows:

In the social science literature, most case studies feature: descriptions that are complex, holistic, and involving a myriad of not highly isolated variables; data that are likely to be gathered at least partly by personalistic observation, and a writing style that is informal, perhaps narrative, possibly with verbatim quotation, illustration, and even allusion and metaphor.

Due to my ontological and epistemological convictions and the research paradigm in which my research is conducted I shall be conducting an interpretivist case study with qualitative research methods. An interpretivist case study design is advantageous for my research study because:

- I am directly involved in the process of data collection and analysis (Creswell, 2007), adopting a subjective rather than objective stance.
- Following Bakhtin (1986) I take a multi-voice approach to the construction of meaning, allowing my own voice, as researcher, to be heard as well as the constructions of my participants (Neuman, 1997; Guba and Lincoln, 1994)
- I am exploring how new insights, constructed in my data, can inform theory and practice (Diaz-Andrade, 2009).

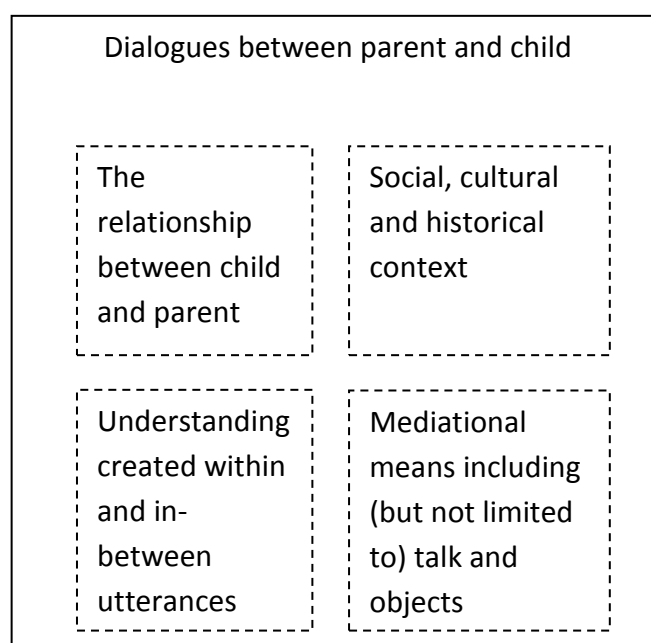
3.5.3 A single (embedded) case study

Yin debates the employment of the single case study method in contexts of inquiry that is 'critical', 'extreme/unique', 'representative', 'revelatory' or 'longitudinal' (2009, p.47-49). The situation of 'revelatory' is of specific importance to my study because I am exploring new ground within the theoretical concept of dialogic space in relation to parent and child dialogues. This is opposed to considering 'revelatory' in the sense of discovering new 'truths' about the social world because this would not be in-keeping with my wider social constructionist and interpretivist positioning.

I have adopted a 'single (embedded) case study design' in my research (Yin, 2009, p.46) with the dialogues between parent and child as the single case through which I address different embedded units of analysis. The need to consider various units of analysis is driven by my engagement with the literature. Firstly, in my literature review, I highlighted the inadequate nature of investigations into maternal scaffolding as they fail to capture the interconnected dynamics of the individual, other people, objects and mediational means within a socio-cultural context (Mascolo, 2005). Rather I argued that, in line with Mascolo (2005), these elements cannot be separated from each other and all act in conjunction. In this sense, the novice's developing competence in a task cannot be attributed to the expert's guidance alone; rather other elements of the situated event *could* contribute to the novice's understanding, including the bilateral relationship between parent and child (Kuczynski, 2003). Secondly, the tension of differing perspectives within the dialogic space may be supported by more than the spoken word. Empirical studies carried out investigating dialogic space foreground the role of mediating artefacts

such as the Interactive White Board (IWB) (Hennessey, 2011) and educational software (Kerawalla, 2015) within formal educational settings, connecting the utility of artefacts with the construction of dialogic space between teachers and learners. Thus, indicating an interrelationship between mediation, artefacts and the creation of dialogic space. Furthermore, the use of multiple modes of communication in classroom dialogue has been explored in relation to meaning-making in teaching and learning practices (Twiner, 2011), indicating that although talk is a central means of communication (following Vygotsky, 1986), talk is supported by other, simultaneously occurring modes of communication. Additionally, it can be argued that the spoken word alone does not create meaning; rather it is the ‘dance of voices and perspectives’ in dialogues in which meaning is created (Wegerif, McLaren, Chamrada, Scheuer, Mansour, Mikšàtka and Williams, 2010, p.614), where silences in-between utterance can be important for spaces of reflection (Wegerif, 2013; Wegerif, 2008). The embedded nature of units of analysis is represented in Figure 3.1.

Figure 3.1 Single case (embedded) design based on Yin (2009)



The perforated lines represent the permeable nature of the units of analysis whereby each unit is not isolated but interconnected to other units of analysis and the case as a whole (Yin, 2009). Littleton *et al.* discuss the inter-related properties of units of interest in relation to 'orchestration of resources' in classroom dialogues, they state: 'foci are not presented as analytically divorced from one another...[rather] the entwined nature of the process' is analysed with each foci being fore-grounded or back-grounded but remaining present (2010, p.5). As the units of analysis are interdependent within the dialogue they can be considered as one single (embedded) case study rather than a multiple case study considering each point of analysis separately. This design allows for the complexity of simultaneously occurring units to be addressed in turn *and* also as one complete set. It also allows for the foregrounding of particular units of analysis that are constructed during the stages of analysis. The specifics of how the single (embedded) case study is operated are discussed in Chapter 4.

3.5.4 Issues of generalizability, reliability and validity in case study research

The case study approach does attract criticism from researchers with an alliance to other research approaches (Burgess *et al.*, 2007). Advocates of case study research in educational inquiry, however, hold a differing perspective on the value of this approach, arguing that: 'social scientists' traditional, restricted conception of generalizability is problematic for applied fields such as education' (Donmoyer, 2009, p.46). Yin (2009) points out that case study research is normally criticized, amongst other issues, for its limited basis for scientific generalisation. However, in the case of my research, I am not interested in scientific generalisation. In

approaching my research from the perspective that all realities are socially constructed between individuals I acknowledge that meaning will mean different things to different individuals in the specific time and space that the meaning was created. This is not only the case for the participants of the research but also for the researcher's interpretations of the phenomenon under question. Schofield concurs: 'the goal is *not* to produce a standardised set of results...rather a coherent and illuminating description of and perspective on a situation' (2009, p.174).

Some interpretivist researchers will reject the notion of generalizability completely (Denzin, 2001) whereas other interpretivist researchers will give it a low priority as 'practically speaking...it is clear that numerous characteristics that typify the qualitative approach are not consistent with achieving external validity as it has generally been conceptualised' (Schofield, 2009, p.173). However Gomm *et al.* state that: 'generalization is not an issue that can be dismissed as irrelevant by case study researchers' (2009, p.111). It is for this reason that I shall now offer my argument for the ways in which my single case study demonstrates interpretivist generalizability.

Schofield (2009, p.76) argues that when regarding generalizability in case study design we should consider the following two questions:

1. To what do we want to generalize?
2. How can we design qualitative studies in a way that maximizes their generalizability?

Schofield is not writing of generalizability in the 'classical' sense, but in relation to 'qualitative researchers interested in the study of educational processes and institutions' (2009, p.76). Schofield suggests that generalization should be considered in terms of three domains: to *what is*, to *what maybe* and to *what could be* (2009, p.76-77, emphasis in original). Next, I discuss these three domains in relation to my case study approach.

- Studying what is

Providing a picture of *what is* through observing the dialogue that occurred between parent and child.

- Studying what may be

Through my interpretation of *what may be* occurring in the dialogues between the parent and child, and through seeking the perspectives of the parents.

- Studying what could be

Through other practitioners reading my work and comparing it to their own practice of *what could be* happening in parent and child dialogues in their own educational settings.

This third domain of what could be leads onto another way that qualitative single case studies can be generalisable. Donmoyer (2009) argues that there are three advantages of the case study in terms of generalizability, each level of which I discuss below.

- Accessibility

Donmoyer argues that a case study allows both the researcher and the researcher's audience to experience unique situations and individuals within their own culture; not only in the sense of providing opportunities to learn of 'truly exceptional' practice but also in terms of practitioners 'modelling' experiences for other practitioners (2009, p.62). This directly relates to the second advantage.

- Seeing through the researcher's eyes

'Case studies allow us to look at the world through the researcher's eyes and, in the process, to see things we otherwise might not have seen' (Donmoyer, 2009, p.63).

This does not necessarily mean the reader has to accept the researcher's interpretation; rather the reader is given an opportunity to view the situation from another perspective, that of the researcher. The reader can then make their own choices in relation to the phenomenon. This aspect of generalizability is very fitting with my research. As I argue in my literature review, based on the work of Bakhtin (1986) and Wegerif (2010a, 2010b) meaning is co-constructed through debate and multiple perspectives.

- Decreased defensiveness

'Human beings socially construct reality and those in power can often force the social constructions of other' (Donmoyer, 2009, p.65). Thus practitioner research carried out through case studies in their own practice provides research evidence for other practitioners on a more equal level than research commissioned or conducted for large corporations or government. Reading another practitioner's

account of how phenomenon is interpreted within their setting can provided the reader with openings to consider similar experiences in their own practice. The key to viewing this advantage of case study is how practitioners can relate their own practice to that of the researcher. This does not necessarily mean the two situations are going to be the same; acknowledgment that our realities are socially constructed points to the case that no two situations will be exactly alike. This leads onto considerations of validity, reliability and rigour in the case study approach.

I detail each validity claim in relation to my case study in the Table 3.1 below.

Table 3.1 Judging the quality of research designs

Measure of quality	Explanation	How quality claim applies to this study
Construct validity	In achieving an acceptable amount of construct validity in qualitative inquiry it is necessary to define the issues of interest within the research.	In my case study the issue of interest was the use of dialogue between parent and child in meaning making. More specifically I was interested in the theoretical construct of dialogic space in relation to parent and pre-school aged child's dialogue
Internal validity	Internal validity is a major concern of experimental studies that make casual relationship claims regarding their data, however, in descriptive and exploratory studies that are not concerned with 'this kind of casual situation' the problem is eliminated (Yin, 2009, p.43).	I am not investigating casual relationships
	Making inferences from the data can be increased by carrying out	My systematic data analysis process will be discussed in

	systematic re-visiting of data during the analysis process to ensure patterns of interest are present within the data.	chapter 5.
External validity	Case study research relies on ' <i>analytic</i> generalization' rather than the ' <i>statistical</i> generalization' of survey research (Yin, 2009, p.43, emphasis in original).	I shall draw upon the theories that provide the background for my study (and increased my construct validity) to identify how my study is generalisable to <i>other</i> theory and is supported or refuted by it.
Reliability	If reliability is taken to mean replication over different contexts, participants, observers and occasions (Coe, 2012) then reliability is not necessarily desirable in interpretivist case studies. Reliability is concerned with an auditing process (Yin, 2009)	<p>During my research study I have taken measures to ensure the reliability of my study. These measures include:</p> <p>Being transparent in my interpretivist research paradigm</p> <p>Being transparent in approach to data collection and analysis</p> <p>Keeping careful records of data collection</p> <p>Keeping a research diary</p> <p>Maintaining a systematic approach to data collection and analysis</p> <p>Carefully documenting procedures followed, dates and contexts</p>
Internal generalisation	The researcher may not only be seeking to generalise to the wider population but also may be generalising within the case; 'internal generalisation' (Gomm <i>et al.</i> , 2009, p.111).	I have limited my case study to my participants and did not generalise my findings to other members of the educational setting.

Rigour	The rigour that is applied in the case study approach is 'more <i>rigorous</i> ' than in some quantitative studies through the 'transparent and consistently-applied techniques for analysis and interpretation' (Freebody, 2003, p.69) emphasis in original),	I have adopted rigorous and systematic methods of data collection and analysis and have been thorough, transparent and robust in my analysis and interpretation.
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3.6 Chapter summary

In this chapter I have accounted for my ontological and epistemological positioning and have given a justification for my interpretivist research paradigm and case study approach in light of situating my research within socio-cultural theory. My ontological and epistemological beliefs are continued in and supported by the interpretivist paradigm and case study approach I have chosen. I have provided my reader with a comprehensive account of my use of the case study approach to design a valid and generalisable piece of research. My study design is detailed in the next chapter. There I discuss: the methods I have employed to collect my data, my research participants, the ethical implications of my study and my role as a practitioner-researcher.

Chapter 4: Methods of data collection

4.1 Chapter introduction

In the previous chapter I detailed my ontological and epistemological positioning as well as discussing the case study approach. Following on from these considerations, in this chapter, I provide the specific details of the study I carried out including how participants were selected, ethical issues and procedure. In-keeping with a case study approach it was necessary that: 'the data that is gathered should allow for the researchers to capture relevant, substantial and rich data which involves varied contexts and the detailed views and actions of the participants so as to allow the researcher to fully engage in the process of analysis' (Waring, 2012, p.301). Before outlining the methods employed in my exploration of dialogue between parent and child, I present my reader with details of the context in which I collected my data.

4.2 Context of data collection

'A crucial objective of empirical research designs is to ensure transparency of the research process' (Hedges, 2012, p.23). Acting within social-cultural theory the context of data collection will have profound implications for the data generated and the conclusions drawn (Mercer, 2000). Given this, I provide below an overview of the educational setting in which my case study is set to enable the reader to appreciate the broader context of my research. I then proceed to discuss the context of the research from the participants' and researcher's perspective.

My aim was to explore how dialogic space is opened, widened and deepened during dialogues between parents and pre-school children. I collected my data from an

early years establishment situated in a conurbation in the central region of England. The setting, established in 1996, provides education and care for children aged birth to 5 years. The setting offers both pre-school education sessions (playgroup), where children are left in the care of qualified education practitioners and 'stay and play' sessions where parents and carers are invited to stay with their children and enjoy the activities and social aspects of the group together. The setting operates five playgroup sessions and one 'stay and play' session per week, term-time only. The Early Years Foundation Stage (EYFS) curriculum is followed. The early years setting operates from a purpose built children's suite within the Parish Church Centre and upholds a Christian ethos. For example, the children are invited to participate in prayers before snack-time and all major Christian festivals are shared with the children under the instruction of the Bible. This does not mean the service is open only to Christian families; families from across the community are welcomed into the group. Children who have been identified as having Special Educational Needs and children whose first language is not English are all included in the setting. The service offered to the community is popular: around 80 families are registered with the establishment; however, not all of these families attend all of the sessions all of the time.

On average, between 40 and 50 children and their parents/carers attend the weekly 'stay and play' session. The session is predominately attended by mothers and their pre-school children. The setting asks for a voluntary contribution from parents who wish to attend. I, along with five other volunteers, organise the 'stay and play' sessions. The service provided within the 'stay and play' group does not fall under the scrutiny of OFSTED and is not required to provide any type of formative

assessment on the children who visit such as the EYFS Progress check at age two or the child's attainment against the Early Learning Goals (ELGs). Good practice, as stipulated within the Early Years Foundation Stage (EYFS) - such as providing a safe, stimulating environment, positive relationships with parents and safeguarding children - is followed. Volunteers who organise the service are qualified in first aid, safeguarding children and food hygiene. All volunteer team members hold a DBS check.

The facility is run alongside and in conjunction with the pre-school education provision (playgroup) mentioned above. The playgroup is operated in accordance with the EYFS curriculum and OFSTED requirements. The playgroup accepts children from aged two years until they attend mainstream school. Many of the children who are over the age of two years attend the 'stay and play' group and the playgroup simultaneously. In the playgroup's last OFSTED inspection in June 2014, the group was graded as outstanding in all areas. There are six paid members of staff employed by the playgroup, four of whom possess level 3 or higher qualifications. The playgroup is currently oversubscribed and fully attended by 24 children. I am a qualified Early Years Professional (EYP) and I have worked in early years education for the last ten years. During this time I have been employed both in paid and voluntary roles with varying levels of leadership responsibilities.

4.3 Ethical considerations

The participants in my study consisted of mother-child dyads who were recruited from my early years workplace, described above, and the sample of participants was determined by that setting. Ideally, I would have observed a mixture of

mothers and fathers but the population I had available at the time of carrying out my data collection meant my choice of participants was necessarily limited to mothers and their pre-school child. This does, however, give scope for future research with father and child participants.

My research has been conducted in accordance with British Educational Research Association (BERA, 2011) and The Open University Human Research Ethics Committee (HREC) guidelines. BERA's (2011) guidelines are underpinned by principles of having respect for individuals, knowledge, values, quality and academic freedom in educational research. I have gained ethical approval for each stage of my research from HREC. I have attached a copy of my HREC approval letter as Appendix B. I understand there are always ethical considerations when conducting research with human participants but I consider my research warrants the use of human participants because they are essential to this study (The Open University, 2013). Ethical considerations have become an intrinsic part of my study design, not least because of the interpretivist research epistemology and the research paradigm I have adopted as well as the close professional relationship I hold with my participants (Guba and Lincoln, 1994). Below I provide the specific details of the ethical considerations I have managed in designing and conducting this research:

1. Informed consent
2. Privacy
3. Avoiding harm
4. Avoiding exploitation
5. Consequences for future research

(based on Hammersley and Atkinson, 1995)

4.3.1 Informed consent

Individuals should almost always be informed about the research that is being carried out and their consent given in such a way that the individual knows what they are consenting to (Hammersley and Atkinson, 1995). Hammersley and Atkinson (1995) note that the only exception to this rule is in covert participant observation. The observations undertaken as part of my study were overt and thus I made every effort to inform my prospective participants of the nature the research study. BERA state that: 'deception and subterfuge' should be avoided (2011, p.6). However, as discussed by Hammersley and Atkinson (1995), it is difficult for a researcher to be entirely open about the research study the individual is being asked to participate in. In the case of my research, an exploratory study, I did not know what the findings or my interpretations would be at the time of recruiting my participants. Obviously I had not carried out any analysis, so I could not tell my participants explicitly what I was considering, in terms of themes, at that stage. This is not to say that there was any active deception (Hammersley and Atkinson, 1995) in obtaining informed consent. I informed prospective participants that I was *exploring* colour and size through talk in my information sheet (Appendix C) and I did not make any commitments as to what I expected to find in the data I collected. This approach was taken firstly to ensure my participants were fully aware of the research they were involved in (BERA, 2011) and secondly because hiding my intentions from my participant's would be 'destructive of the aim of uncovering constructions' (Guba and Lincoln, 1994, p.115) within my interpretivist paradigm.

Participation in the study was entirely voluntary. BERA state that in order for informed consent to be voluntary 'participants understand and agree to their participation without any duress, prior to the research getting underway' (2011, p.5). I adopted an opt-in approach to recruiting participants. The participants had the right to withdraw from the project at any time (BERA, 2011) and participants were assured that non-participation or withdrawal from the study would not affect their child's future care and education in the establishment. All of these details were included in the information sheet (Appendix C) that I distributed in advance to prospective participants.

BERA (2011) guidelines require that researchers comply with Articles 3 and 12 of the United Nations Convention on the Rights of the Child (UNCRC). This means that the: 'best interests of the child must be the primary consideration' (Article 3) and that 'children who are capable of forming their own views should be granted the right to express their views freely in all matters affecting them, commensurate with their age and maturity' (Article 12: BERA, 2011, p.6). Consistent with BERA (2011, p.7) guidelines due to the age of the child participants it was necessary to 'seek the collaboration and approval of those who act in guardianship', (in this research the mothers of participating children) to give her consent to her child participating. Mothers were informed that if for any reason the child did not want to participate on 'the day' they could stop the activity at any time, covering issues relating to the child's assent in the project. Each mother signed a consent form for her and on her child's behalf before participating in the study. The consent form is provided as

Appendix D. By taking these steps it can be argued that all reasonable measures were taken to gain informed consent for this research project.

4.3.2 Privacy

BERA state that: 'the confidential and anonymous treatment of participants' data is considered the norm for the conduct of research' (2011, p.7). Hammersley and Atkinson (1995) discuss how a frequent concern about collecting data from participants is making issues that should remain private available for public knowledge. Like informed consent, the concept of privacy is complex (Hammersley and Atkinson, 1995). In order to maintain the privacy of my participants I have opted to use pseudonyms throughout, not reveal data collection setting's name or specific location and not to use any video or photographic data in my presentation of analysis. A further way I have maintained the privacy of my participants is through the notion of ownership of data (Hammersley and Atkinson, 1995). Rather than taking the video-recorded observations and carrying out analysis based on my own interpretations alone, I asked the mother participants their views on their dialogue with their child through Video-Stimulated Reflected Dialogue sessions (VSRD is detailed in Section 4.6.3). This enabled me to gain a deeper understanding of the recorded data but, more importantly in terms of ethical considerations, enabled the mothers a certain amount of ownership of the data collected. It gave an opportunity for the mother to put across her own interpretations that were then considered during the analysis stages of this study.

4.3.3 Avoiding harm

BERA guidelines state that: 'researchers must recognise that participants may experience distress or discomfort in the research process and must take all necessary steps to reduce the sense of intrusion and to put them at their ease' (2011, p.7). Whilst the possible consequences of research involving experiments such as medical trials can be quite apparent, the possible effects of harm in observational studies should not be dismissed (Hammersley and Atkinson, 1995). These effects can include stress and anxiety suffered by the participants, particularly if the research deals with a sensitive area (Hammersley and Atkinson, 1995). I did not want the collection of data to cause any unnecessary upset and distress for the participants; the study is concerned with exploring dialogues between mother and child not making judgements regarding a mother's parenting style. At no point during the study was it my intention to make any mother feel inadequate or concerned about her parenting skills. In order to overcome this ethical concern I was completely open with my participants regarding the nature of this study (Robson, 1993) and its explicit focus on dialogue. I relied on my professional intuition to judge if or when a participant may be feeling inadequate about their parenting skills and immediately reassured the mother that her abilities as a parent were not under question but that the study was simply to identify different talk patterns between mother and child. During my lengthy career as an Early Years Professional I have dealt with many situations where mothers may feel they are 'not doing a good job' at parenting. At such times I will always reassure the mother that she *is* doing a good job and highlight the positive aspects of her parenting skills. I tell mothers that parenting is a very tricky role that we do not

always get right all of the time but by reflecting on what we have done allows us to act in a better way next time. Also, the emphasis on ownership of data (discussed above in Section 4.3.2) provided a means of ensuring the mother's interpretations were included in the analysis of data. The VSRD sessions provided a time to share the observational footage and give the mother the opportunity to voice her views on what occurred in the dialogue, hopefully elevating anxiety about how the observation appeared in the video.

4.3.4 Avoiding exploitation

Hammersley and Atkinson (1995) refer to certain situations where participants may feel they have been taken advantage of in the production of someone else's research. However, exploitation in research is not something that is easy to define because it is a subjective entity that cannot be measured (Hammersley and Atkinson, 1995). I did not want my research participants to feel exploited and took several measures to ensure this did not happen:

- Mothers were assured that their child's care and education within the setting would not be affected in any way by their participation or non-participation
- The power-balance between researcher and participant was reduced by my existing, familiar and simultaneous role as a volunteer in the setting at the time of data collection.
- Parents knew I did not hold any position of responsibility within the setting, reducing the potential effect of hierarchal power relations.

Another way I ensured my research was not an exploitation of my participants was through studying the powerful not the powerless (Hammersley and Atkinson, 1995). As the dialogues that occurred before, during and after the data collection were a social construction between me and my participants I could utilise these situations to empower my adult participants and their children as being really useful and valuable in my research process.

4.3.5 Consequences for future research

BERA states that: 'all educational researchers must protect the integrity and reputation of educational research by ensuring they conduct their research to the highest standards' (2011, p.8). Hammersley and Atkinson (1995) argue that bad experiences through previous research with participating settings and individuals can have a negative impact on the occurrence of future research. For this reason, I was careful to conduct my research study in an appropriate manner that would not restrict my own or other researchers' use of this setting or participants in future research. One of the ways I did this was to ensure appropriate precautions were taken with the video- and audio-recorded data I had collected. In order to meet the requirements of the Data Protection Act (Great Britain, 1998) I ensured all data I collected protected the privacy of individuals' personal information and ensured participants understood why the data was being collected and what it was used for. The most sensitive source of data I collected was the video-recorded observations of the mother and children. All video-recorded data was stored on a password-protected home PC and backed up on DVD discs that were stored in a locked office drawer. I transcribed all of the video footage myself alleviating the need for third

parties to be involved with the raw data. I separated observational data from personal information within 24 hours of collection and used codes to identify participants in the transcriptions. Codes were stored in a locked office drawer separate from the observational data. To protect anonymity and confidentiality I have not referred to any participant or setting by their actual name. Any sensitive information, i.e. names on consent forms have been blocked out before being included in this thesis. Alongside this, I have not referred to any confidential paperwork with which I came into contact within the setting, such as individual child's records. I consider by taking these measures I have protected the anonymity and confidentiality of the individuals and setting involved in this research study.

In the following sections, I set out how I collected my data. Firstly, I set out general aspects of the use of unstructured observations as a data collection method in case study research. I then progress to provide the particulars of how methods of data collection were employed in the exploratory and semi-structured phase of my case study. I begin with consideration of observing the dyadic interactions of mother and child.

4.4 Observing dyadic interactions: unstructured observations

In this section, I describe the approach I took to unstructured observations in real-life situations within the early years setting in which I work. Observation is used as a data collection method in both a structured or unstructured way. 'Unstructured observation is used to understand and interpret cultural behaviour' and is 'based within the interpretivist/constructivist paradigm that acknowledges the importance of context and the co-construction of knowledge between researcher and

‘researched’ (Mulhall, 2003, p.306), rather than observation being used in a structured way of checking a ‘list of predetermined behaviours’ (Mulhall, 2003, p.307). In this case study, the approach to observation I have chosen is unstructured, in keeping with my ontological and epistemological positioning and research paradigm. ‘Observation within the naturalistic paradigm is not unstructured in the sense that it is unsystematic or sloppy’ (Mulhall, 2003, p.307), reducing concerns of rigour (Flyvbjerg, 2006). Rather it is unstructured in the sense that the researcher may not, at the beginning of their study, have predetermined ideas of the discrete behaviours they might observe or during the process of data collection the researcher’s ideas about the discrete behaviours they are observing may change direction (Mulhall, 2003).

Mulhall (2003, p.307) argues that unstructured observation methods serve to collect data that:

- Provides insight into interactions between dyads
- Illustrates the whole picture
- Captures context and processes
- Informs of the physical environment surrounding the interaction

Utilising unstructured observational methods of data collection can be advantageous as the researcher has the ability to use this method to “close-in’ on real-life situations and test views directly in relation to phenomena as they would unfold in practice’ (Flyvbjerg, 2006, p.235). This can open up the possibility of the researcher, if they are open-minded regarding their findings, to consider issues within the data that they had not previously thought of or even contradict their

initial interpretation of the situation. The observational data in my semi-structured phase of my study offered me the opportunity to engage with issues regarding how mother and child constructed meaning together in ways that I had not previously considered and illuminated the complexity of issues I had raised in my evaluation of literature. The use of unstructured observations provided me with rich data to carry out in-depth analysis around revealing some interesting and unexpected findings (analytic findings are detailed in Chapters 6 and 7). Such findings would not have been possible without the detailed data collection through unstructured observations; structured observation with pre-determined foci would not have given me the scope to explore the data in the way that unstructured observations have.

The unstructured observations were carried out in a naturalistic setting. However, the distinction between naturalistic and laboratory observations can become blurred. Robson argues that even naturalistic observation of real life settings has a certain element of 'artificiality' for the purposes of the research study (1993, p.83). I can relate to this in the video-recorded observations I made. Despite the data being observed in a real life, naturalistic setting, there were certain precautions that I had to take when conducting my unstructured observations. These included concerns such as observing all sixteen dyads participating in a similar activity. This was not done for the purposes of comparison between dyads in later analysis but so I had boundaries in my case. Also, the observations had to be conducted in a quiet area of the educational setting. This was not done to isolate the participants in a laboratory-type setting but so video- and audio-recordings could be made of

sufficient quality to be understood in playback. This was essential for my other method of data collection, the VSRD, and for my own interpretation during analysis.

During data collection the researcher's role is critical in relation to the data collected. Gold (1958) states that there are four different roles a research can play in unstructured observation. These are:

- The complete observer, whose presence is maintain at a distance from the participants without interacting with them or informing them of the observation
- The complete participant, who interacts with the group but conceals their role as observer
- The observer as participant, who participate in interaction with the group but also takes time to interview to gain a deeper understanding of the social situation. The observers role is known to the participants
- The participant as observer, who takes core role in the social situation, is involved in the day-to-day activities of the group and whose role is known to the other participants

Mulhall (2003) questions how useful this typology is in modern research as researchers can be situated in a variety of roles in their research. Robson suggests that a further category of 'marginal participant' may exist in certain studies where the participant is familiar with the observation setting and plays the role of largely passive, though completely accepted participant (1993, p.198). There can be seen to be a trade-off between the advantages and disadvantages of the use of participant and non-participant observation methods. Being a participant increases

the observer's chances of getting to know the situation as they are part of the group; however, being too closely involved in a situation can lead to questions of bias and concerns that the observer is too closely involved to adopt an outsider perspective. If the participant/non-participant observer's role is considered as a continuum with the absolute observer at one pole and the absolute participant at the other pole, I visualise myself as situated between these poles but more towards the participant end of the continuum. I am a participant in the sense that I volunteer in the setting where I carried out my unstructured observations, so I have more 'insider' knowledge of the context than if I were just a researcher using the setting for the purposes of this study. However, I did not have any direct intervention in the activities as they happened. Thus, the dialogue and actions that occurred between the mother and child during the activities were their own and not orchestrated by me. Therefore, a balance between participant and non-participant observer was the most appropriate to the context of research, the participants and my research questions.

In the following section, I outline the data collection methods I used to record events during the dyadic interactions observed.

4.5 The exploratory phase: A progressive structuring

The single (embedded) case study involved a 'progressive structuring of the research process' adapted from the case study work of Day Ashley (2012). This comprised two phases of research over the period of two academic years (academic years 2012-13 and 2013-14). There was an exploratory phase followed by (and overlapping with) a semi-structured phase (Day Ashley, 2012).

The exploratory and semi-structured phases of data collection are represented below in Figure 4.1 and are explained in the remainder of section 4.5 and 4.6 and Appendix E.

Figure 4.1 The exploratory and semi-structured phases of the case study

Exploratory phase 1: Consideration of a suitable activity to observe mother and child dialogue	
Types of activity piloted	Free-play Purpose-made books Wooden block activity
Conclusions drawn	Focusing the mother and child's attention to the concepts under question in a naturalistic setting would most likely be achieved through a pre-determined activity. Supplying a wooden block activity with the purpose of sorting blocks into different concept-related categories would focus attention on the concepts under scrutiny.
Exploratory phase 2: Establishing a means of seeking the perspectives of mother participants into events occurring in the concept-focused activity	
Test piloted	Video Stimulated Reflective Dialogue (VSRD)
Conclusions drawn	Video Stimulated Reflective Dialogue would be a suitable technique to use with mother participants in semi-structured interviews to construct perspectives on events occurring in naturalistic observations.
Exploratory phase 3: The use of standardised testing to establish the age-range of child participants from sample available	
Technique piloted	The Object Classification Test for Children (OCTC)
Conclusions drawn	The OCTC test was a suitable standardized test to use with pre-school children in establishing their competence in colours red, blue and yellow and sizes big and small. The age range of 30-36 months would be used in selecting participants for the semi-structured phase.
Semi-structured phase 1: OCTC testing to select child participants who were not competent in the colours red, yellow and blue and size big and small	
Semi-structured phase 2: Unstructured, naturalistic observations of mother and child (aged 30-36 months) engaged in wooden block sorting activities	

Semi-structured phase 3:

Semi-structured interviews using a VSRD technique with mother participants

The exploratory phase involved a period where I explored various elements of my research study; these included developing a suitable activity to focus my observations on, piloting a Video-Stimulated Reflective Dialogue technique and choosing an appropriate standardised test to assess the child's competence in colour and size. The exploratory phase consisted of pilot studies exploring the following:

- The choice of a suitable activity to engage mother and child in dialogue about the concepts of colour and size. Free play, purpose-made books involving the setting's Talking Ted toy and wooden blocks were considered
- The utility of a standardised test, the Object Classification Task for Children (OCTC), to test children's understanding of the concepts of colour and size.
- The quality of video- and audio-recording equipment
- The use of a video-stimulated technique to prompt mothers to reflect upon events during semi-structured interview

These pilot studies are detailed in Appendix E. I focus below on the main study carried out during the semi-structured phase. This includes details of the methods of data collection I employed based upon the findings from the exploratory phase.

4.6 Semi-structured phase: the main study

The semi-structured phase of my case study utilised methods of data collection that were consistent with sociocultural theory and addressed my research questions. In

the following sections I shall set out the procedure I followed in this phase of data collection including observation and interview.

4.6.1 Participants

Mothers were selected and asked to consider taking part in the study based on their child's age. Information on the child's date of birth was obtained via the setting's manager. A copy of the consent form used to ask permission for the study to take place within my workplace is included as Appendix F. All mothers with children in the age range of 30-36 months at the time of the study were approached and asked if they would be willing for them and their child to participate in the main study.

This was thirty dyads in total. Each prospective adult participant was approached on a face-to-face basis during a 'stay and play' session. During this interaction I briefly explained why I was asking them to consider participating in my study and provided them with an information letter detailing the research study in more depth (Appendix C). During the next 'stay and play' session I asked the prospective participants if they had had time to consider my proposal and happily answered any questions that arose. Twenty six mothers accepted my invitation for both themselves and their child to be participants subject to their child's Object Classification Task for Children (OCTC) results (Smidts *et al.*, 2004). A consent form was completed by all mothers confirming their own and their child's consent to participate in this study (Appendix D).

The OCTC test was conducted with the children, with the consent of their mothers, in order to ensure that the children participating in the main study were not already competent in the colours red, blue and yellow, and the size big and small. The

procedure followed was informed by the pilot OCTC study I had carried out in the exploratory phase (discussed in Appendix E). The results of the OCTC indicated that six of the child participants were competent in the colour and/or size parts of the test. These participants, and their mothers, were thanked for their time and informed they were not needed for the remainder of the study. Of the remaining participants, four dyads either completed just one or none of the activities during the semi-structured phase so their data (if available) was not used in this thesis. This left sixteen mother and child dyads who were observed on both occasions (colour and size activities) providing the observation data for this case study. Out of the sixteen mother-child dyads who participated in colour and size activities, thirteen mothers were interviewed. The other three mothers were unable for interview either through 'no show' or declining the opportunity to participate in the interview part of the study. Without supporting interview data I could not analyse the video-recorded observations in the same way as the other thirteen sets of data and so the case reported here is based upon thirteen participating mother and child dyads. This information is summarized in Appendix G.

4.6.2 The dyadic concept-focused activity

During the exploratory phase I gave careful consideration to the activity that I would use in the semi-structured phase of my study. In the activity the materials used were 36 wooden blocks. These blocks were three-dimensional and were either a 4cm cube or 8cm x 4cm x 4cm cuboids. The blocks were red, yellow and blue in colour (12 of each colour). According to the manufacture's guidelines the wooden blocks were suitable for children aged 18 months and over. The wooden blocks were not purchased specially for this research study; rather the blocks were

purchased from an educational catalogue by my workplace to be used in the playgroups and 'stay and play' sessions.

The activity I chose consisted of two sub-activities. The two sub-activities were very similar in structure, variation only occurring between how the mother and pre-school child were asked to sort the wooden blocks. In the first activity, the mother and child were asked to sort the blocks in relation to their colour. In the second activity, the mother and child were asked to sort the blocks by size. The mother was verbally advised that she would be participating in a sorting activity with her child and a laminated instruction sheet (Appendix H) was supplied on the table for the mother to read before they started the activities. The activity was set up on a child-sized wooden table. Two chairs were supplied for mother and child, positioned around the table. The activity took place in the children's suite in my workplace. Before the mother and child entered the room I placed a clear plastic box containing the 36 wooden blocks in the centre of the table and the laminated instruction sheet next to it.

4.6.3 Observational procedure: video recording and VSRD

A procedure of video-recording each of the sixteen dyads for both colour and size focused activity was started. All of the activities were video-recorded over a period of two terms in the 'stay and play' sessions in the academic year 2013-14. I was careful to ensure that any mother and child participating in the observations were not missing out on any important events in the 'stay and play' timetable. For this reason, recording did not take place on days when the photographer was taking professional photos of the children, party days and planned Christian services taking place in Church. Mothers were informed of their planned dates for observations

and adjustments required for planned non-attendance, for example family holidays, work commitments or days out, were re-booked. An oversight in my consent form meant I had not asked the participating mothers for a contact number so measures were taken to obtain phone numbers from the mothers on a one-to-one basis so communication via text message could be made. Participants who did not attend on the planned day for their observations, for example due to illness, were given the opportunity to participate on another mutually convenient day. A spreadsheet of participants, contact numbers, planned dates for observation and completed observations was compiled to manage the data collection process.

Measures were taken to ensure the best quality video and audio footage was generated (Appendix I). The mother was aware of and agreed to the filming of the observations. Permission to film the child was agreed by the mother due to the child's age. Despite the risk of procedural reactivity, i.e. the mother being aware of another audience for her utterances other than her child (Bakhtin, 1986), video-recording was the only way possible for me to collect data in enough detail for later analysis. The video-recorder was unmanned during the activity as I was aware that the presence of myself or another practitioner from the setting may constrain the actions of mother and/or child under the watchful eye of a 'teacher' (Barnes and Todd, 1977; Piaget, 1932).

4.6.3.1 Semi-structured interviews and Video-stimulated Reflective Dialogue (VSRD)

After the video-recorded observations had been made and I had had the opportunity to watch the video footage, the mothers involved in the study were

invited to participate in one-to-one, face-to-face semi-structured interviews incorporating VSRD. Thirteen semi-structured interviews were conducted. The duration of these interviews was between 20-30 minutes each. The interviews were to discuss the concept-focused activities they had taken part in with their child.

The interviews provided an opportunity for interviewer-interviewee co-construction of the parent-child observation. This provided a different angle from which to interpret the observational data as the mother participant could voice her views.

The two methods of data collection (observations and interviews) complemented each other. By using both methods together I could produce data of what people actually do (observed through my gaze) as well as about what they perceive they do, as told in interview (the co-construction of their interpretation of events) (Mulhall, 2003). Importantly, the interviews provided the opportunity to seek another perspective to aid my understanding of the observations, allowing for a 'detailed study...from multiple perspectives by getting others involved in the activity to review the video' (Haw and Hadfield, 2011, p.56). The mothers may have different interpretations of what was occurring in the activities than I did. As discussed by Bruner, life can be 'lived...experienced...or told' (1984, p.7). The observations of mother and child were life as 'lived' as they occurred as and when they were recorded. Each interview was conducted after the event and thus presented an opportunity for the mothers to reflect on the activity and re-present the event after it occurred through co-construction in the interview; life as 'told'. The life as 'told' by the mothers did not necessarily match the life as 'experienced' from my interpretations of the observational data. Rather the life as 'told' in interview generated new ways of considering the observations, introducing

previously unthought-of interpretations of what may be occurring. I do not consider this a limitation of my research method; rather the life as ‘told’ in interview provided a different perspective from which to view dialogue between mother and pre-school child.

Collecting multiple forms of data was not intended as a means of triangulation. Triangulation has been described as a search for *convergence* of the data from different sources on a common topic (Wiersma, 1995). However, the convergence of data does not lie easily with my theoretical positioning. As explored in Chapter 2, convergence is not always possible or desirable. In fact ‘differences between sets or types of data maybe just as important and illuminating’ as those that converge (Hammersley and Atkinson, 1983. p.199). In further support of the view that triangulation can be problematic, Silverman (1993) suggests that it is inappropriate to construct an overarching reality from data collected from different sources, rather data should be considered in the context it was collected. For these reasons, the data collected from multiple sources was used to gain a deeper understanding of the complexity of phenomena under scrutiny during analysis.

4.6.3.2 Interview procedure

The interviews were booked with the mothers in advance and were conducted in the research setting in a private room during a ‘stay and play’ session. As each mother would have their child with them on the day of the interview, they were given the opportunity to leave their child in the main room under the care of a qualified practitioner. All mothers accepted this offer. The mothers were reassured that if their child became upset during their absence they would be contacted. To

my knowledge, no child became upset, and no mothers were called out of the interviews for this reason. The mothers were also informed the interview should last about 30 minutes so they were aware of how long they would be away from their child. The interviews were conducted in this study to provide a means of gaining a deeper understanding of the dialogues by exploring the mother's perspectives on the talk that had occurred during the activities.

Each semi-structured interview followed a general interview guide that I had prepared before the interviews (Appendix J) and a list questions specific to each mother based on the video footage I had watched. My aim was to cover a variety of areas for discussion. I identified and constructed a mixture of themes which I followed up during the interview. Thus, my interview style was one of flexibility rather than structure with aims of developing a deeper understanding of the mother's interpretation rather than posing the 'right' question (Westcott and Littleton, 2005).

The VSRD provided me with a tool to locate and focus on specific events within the observations. Rather than letting the video-footage roll and prompting the participant to think aloud, the VSRD technique was utilised in a structured style whereby I decided on the events I would select and discuss with the participant before the interview (Haw and Hadfield, 2011). These events were selected because, during my initial analysis, I considered them relevant to my lines of inquiry. Events were chosen in relation to the themes constructed in my interpretation of the observational data (discussed in Chapters 6 and 7). Events and video-footage varied between each mother interviewee as each observed activity

was different. Rather than inundating some mothers with multiple events and having relatively few events to discuss with other mothers I limited my video-footage extracts to 2 or 3 per interviewee. Of course, due to the dynamics of conversation, some mothers had far more to contribute to the joint co-construction of understanding the video-footage than other mothers. VSRD was invaluable in enabling me to collect the rich data from areas of the activity which were of specific interest for analysis. Trying to prompt someone to remember a specific incidence from the past and discuss it in detail would have been virtually impossible without the aid of video-footage.

The video-footage was played back using a laptop with a screen size of 15 in and internal speakers for sound. This provided sufficient video and audio quality in the physical environment of the interview room. The events to be discussed in the VSRD session had been decided before the interview and were located on the video's time bar and pin-pointed using an external mouse. The interviews were audio recorded. I did not video-record the interviews because the purpose of this study was not to investigate the actions and reactions of the mother during the video-stimulated interview; rather the video-stimulation was a means of directing the mother's attention to events I would like to discuss with her in more detail. Thus, an audio-recording was sufficient for the purposes of this method of data collection. The video-stimulation provided a means of recalling the specific event I intended to discuss with the mother *and* a means of 'generating a reflective dialogue' (Tanner and Jones, 2007, p. 322), gaining further insight into the mother's thinking and action in that event (Nind, Kilburn and Wiles, 2015). Details of how the audio-

recordings of the semi-structured interviews were transcribed are discussed in Chapter 5.

Overall, the following data were collected in the main study:

- 13 video-recorded observations of mother and child engaged in a colour (red, blue and yellow) focused activity
- 13 video-recorded observations of mother and child engaged in a size (big and small) focused activity
- 13 semi-structured interviews with mothers including a VSRD element

4.7 My role as practitioner-researcher

Educational studies are carried out for a range of valid reasons: to investigate different phenomena, inform policy, add to existing fields of knowledge or evaluate ways of providing better practice. As the nature of research shows variance so does the researcher's planning and conducting of a research study. Leask (2012) states there are three categories of researcher; academic researchers, contract researchers and practitioner-researchers. Leask defines practitioner-researchers as 'non-university staff who are engaged in research in the field in which they practice' (2012, p.54). I identify myself as a practitioner-researcher as I am conducting research within my own workplace to inform better practice.

As a practitioner-researcher I recognise my own impact in this research study and the potential for bias. I am not an external objective observer but an integral part of the research process (Creswell, 2007; Guba and Lincoln, 1994). It is important for the purposes of transparency to acknowledge the impact that I, the practitioner-

researcher, had on the study and be open about how my beliefs, values and assumptions shaped my research (Bhatti, 2012). Positioning my research study within a particular theoretical perspective means this thesis is based upon certain principles of child development. This creates a bias in the way child development is viewed. For example, from a socio-cultural perspective the child's development is considered as a social process rather than innate, biological maturation. Adopting an interpretivist paradigm also creates bias as human behaviour is considered to be socially, historically and culturally specific with realities being socially constructed.

Furthermore, everyone has their own set of normative assumptions; these are our beliefs about what is 'normal' behaviour. I am investigating a personal and intimate area of child development. I recognise that mothers may have views that coincide with mine regarding how talk between a mother and child should be and may depend on the family's cultural beliefs on child-raising. As I work with western families, I have certain expectations about how these children are raised. For example, I presume that parents will spend time engaged in deliberate child-orientated activity with their children. In contrast, some non-western families child-raising practices mean children are engaged in community life from a very early age (Hoogsteder *et al.*, 1996). I have made certain assumptions, in case study design and data collection, that mothers will seek to foster their child's autonomy and independence by encouraging self-regulation of tasks (Rogoff, 1990). In situations where I have found I am questioning my own or the mother's beliefs I have taken a step back and reflected on what I am investigating and made open and informed

decisions about how to progress, always respecting the families cultural beliefs and their child-raising principles.

A reflexive attitude to the research involving asking specific questions of oneself is needed in order to be open as a researcher (Smyth and Williamson, 2004) and to minimise the potential for bias by being transparent with one's reader about the role I, as researcher, played in the research process (Bhatti, 2012). A good entry point when looking at one's own reflexivity as a researcher is Hellowell's (2006) insider-outsider continua. Hellowell defines this as where a researcher stands in relation to the research project. There are a variety of different continua to consider and the researcher's position on the continua is not static or fixed but may move as the research project progresses. Using Hellowell's insider/outsider continua gives the opportunity to consider my position as a researcher. I consider myself as situated more towards the insider end of the continua on most aspects. For example, I am a woman, so the same gender as the mothers I observed and interviewed; I am a mother, albeit to an older child; I share the same geographical location as my participants so live in the same neighbourhood and access the same local services. In other aspects of my research, I am positioned at the outsider end of the continua. I am an Early Years Professional (EYP) and as such, I am classed as an 'expert' in early years education. Also, mothers may have conflicting views to my 'professional' opinion on how children should be raised.

My research is a construction; an interpretation built up of multiple perspectives including those of my participants and my own. Due to reality being socially constructed I acknowledge that no construction is 'incontrovertibly right' (Guba and

Lincoln, 1994, p.108). I have produced a persuasive argument about a locally and culturally specific phenomena based on my own observations, my own and other's interpretations and supported by literature.

4.8 Chapter summary

In this chapter, I have focused on the context of my study, the participants and the actual procedures I carried out in collecting data for the semi-structured phase of my case study. The data collection period has provided me with rich, in-depth data to analyse. My approach to analysis and my analytical tool are discussed in the next chapter, Sociocultural Discourse Analysis: Analysing dialogue between mother and pre-school child.

Chapter 5: Sociocultural Discourse Analysis: analysing dialogue between mother and pre-school child

5.1 Introduction

The rationale for my analytic approach is consistent with the inductive nature of my exploratory study. I used Sociocultural Discourse Analysis (SCDA) to address how meaning between mother and child during concept-focused activity is co-constructed through dialogue. In the following sections, I discuss: the theoretical background of my analysis; how this method of analysis is appropriate in answering my research questions by comparison to other methods of investigation; the methods of analysis that I situate my thesis within and how I will apply them to the data I have collected. In situating my analysis within a specific analytical method, I needed to consider and debate the various ways that dialogue between mother and child can be analysed. I present this as a prerequisite to my justification for using SCDA.

5.2 Analysing mother-child action: a critique of coding only the mother's talk

Methods of data analysis in many previous empirical research studies into mother and pre-school child problem-solving activity is dominated by a deductive approach that has focused on investigating the metaphor of scaffolding and other closely related notions of guidance and support (Carr and Pike, 2012; Meins, 1997; Wood and Middleton, 1975). Data analysis in the original studies that investigated

maternal scaffolding behaviours (Wood and Middleton, 1975) centred on categorising and coding specific behaviours displayed by the mother during a structured activity. In Wood and Middleton's study '[e]very intervention by the mother in the instruction session was scored in one of five categories each representing a different level of intervention' (1975, p.184). These five levels of intervention have become synonymous with the analysis of scaffolding behaviour and have been used and modified by researchers over the past four decades (e.g. Carr and Pike, 2012; Vandermaas-Peeler *et al.*, 2003; Meins, 1997; Pratt *et al.*, 1988). Analysis using these five levels of intervention, or adapted versions of them, have informed understandings of the optimum levels of support required by mothers in order to assist their children in focused activity. The use of this type of analysis, however, is insufficient because the role of the child is often undervalued in the interaction and the role of objects supplied as part of the task (e.g. wooden blocks) has been ignored. Moreover, attempts to re-model the original Wood and Middleton (1975) 'levels of intervention' to incorporate the interconnected elements of the individual in their context has lead to criticism that the metaphor is becoming too distanced from its original roots (Turner and Berkowitz, 2005).

Mascolo (2005), in proposing the concept of coactive scaffolding, calls for an overhaul of the traditional methods of analysis that do not enquire into the ecological, social and self- roles of scaffolding. Mascolo states that more 'fine-grained moment-by-moment assessments of coactions among the elements of the person-environment system' may be needed in order to extend and offer 'a more precise definition of the *scaffolding* than is normally invoked in the literature' (2005, p.195, emphasis in original). Despite Mascolo's (2005) decisive move towards a

more moment-by-moment approach to analysis I am concerned that his model still relies, somewhat, on a deductive, pre-determined coding of human action into categories. Mascolo discusses a 'levels of co-regulated interaction and support' system which is essentially a coding scheme for categorising the expert's guidance in the activity (2005, p.188). The system is a non-hierarchical measure of the support offered by the expert partner in social scaffolding. Writing at around the same time as Mascolo (2005), Valsiner (2005) also calls for an inspection of traditional methods of analysis of the scaffolding metaphor. Valsiner (2005) criticises traditional analytic methods, based on coding behaviours, on two counts. Firstly, he argues that coding is too static for the progressive, dynamic nature of the actions seen in mother and child problem-solving activity. Secondly, restrictive coding schemes cut off the possibility of unexpected occurrences in unique, 'once and only event[s]' due to their pre-determined nature (Valsiner, 2005, p.204).

Very few studies investigating the metaphor of scaffolding have adopted methods of analysis that allow precise, unique, moment-by-moment tracking of interactions. De Guerrero and Villamil's (2000) study was not concerned with maternal guidance but mutual scaffolding in symmetrical relationships during second language acquisition. Their analytical framework provides an impressive alternative to traditional coded forms of analysis. De Guerrero and Villamil use a microgenetic approach to analysis whereby they scrutinize transcribed recordings of observations in order to observe 'moment-by-moment changes in behaviour' and 'scaffolding mechanisms employed' (2000, p.56). Their analysis is written up in a manner where substantial segments of transcribed data are extracted and commented upon allowing the reader to build a picture of how the scaffolding behaviours unfolded

during the course of the interaction. This analytical procedure provides an element that is missing from traditional methods of analysis - the ability to represent process as and when it occurs, situating action within real-life examples rather than tables of coded material that are very abstract from the observations in which they were recorded. Bakhtin (1986, p.99) writes that:

When one analyzes an individual sentence apart from its context, the traces of addressivity and the influence of the anticipated response, dialogical echoes from others' preceding utterances, faint traces of changes of speech subjects that have furrowed the utterance from within – all these are lost, erased, because they are all foreign to the sentence as a unit of language.

Rather than analysing the spoken word into abstract categories distant from the dialogue in which it was constructed, analysis should focus on how speakers construct dialogue together. This will be discussed further in Section 5.3.

5.3 Analysing jointly constructed dialogue: interthinking between mother and child in dialogic space

Mercer argues that when a researcher is concerned with exploring co-construction of meaning between two individuals they are not concerned with the trajectory of individual social actors moving through education but with 'speakers moving together through a series of related interactions' (2008, p.39). Mercer argues further that the co-construction of meaning through talk poses a hefty 'challenge' for researchers because 'any specific interaction has two aspects both of which have a temporal quality, a *historical* aspect and a *dynamic* aspect (2008, p.44,

emphasis in original). 'Conversations are not planned, they *emerge*' (Mercer, 2008, p. 44). Mercer is writing about the context of classroom dialogue between teacher, pupil and peers where teaching and learning have purposeful, intended outcomes usually related to lesson plans and curriculum objectives, within the pupils Intermental Development Zone (Mercer, 2000). One of the central challenges faced by a researcher researching the co-construction of meaning through talk is that the researcher is observing a 'snapshot' of dialogue that is built on shared experiences rooted in the speaker's and listener's past interactions. This is inaccessible to anyone other than the speaker and listener. Talk is a temporary, spontaneous phenomenon that cannot be understood as a static reality (Valsiner, 2005). Mother and child have a shared history, 'the nature of the shared knowledge being invoked in any dialogue is therefore potentially quite complex'; as a result of their shared past experience they need not be explicit in what they say to each other, 'they often invoke...historical, temporal resources only implicitly' because each assume the other knows what they are talking about (Mercer, 2008, p.44). As word and meaning is not fixed but shaped in dialogue, the words used by speaker and listener can have meaning specific to them, established in previous dialogues and re-visited in the current interaction. This has implications for how researchers analyse the co-construction of meaning negotiated through talk.

5.4 The analytical tool of discourse analysis

Foregrounding dialogue in thinking and learning has led to talk being the primary concern in previous studies into how individuals think on the social plane (Mercer, 2013; Mercer, 2004), how talk may be complemented by other modes of

communication (Twiner, 2011) and how talk is inseparable from other resources (Hennessey, 2011). The analytical tool of discourse analysis can be used effectively to analyse talk and has been used in previous research working from a socio-cultural theoretical perspective (Mercer, 2004). '[L]anguage is intrinsic to the creation and maintenance of the institutions and practices that we may wish to investigate as educational researchers; hence the importance of discourse analysis, and its critical contribution to our analytical toolkit' (Vaughan, 2012, p.272). Discourse analysis is not a 'single coherent theory' (Schiffrin, Tannen and Hamilton, 2001, p.5). The definitions of discourse and discourse analysis are variable terms and their meanings are often shaped by the theoretical perspective of the discipline using them (Vaughan, 2012). Also methods of discourse analysis evolve over time with new frameworks of reference being produced by researchers interested in how discourse analysis can be used in the analysis of different phenomena (Hennessey, 2011; Twiner, 2011; Mercer, 2004).

Each type of discourse analysis varies from others in relation to the specific features of the conversation or interaction under investigation. In the most basic terms there are different types of analysis which primarily focus on the context, organization or structure of talk. As discussed in the previous section, some overlaps in methods are apparent between different types of discourse analysis. SCDA is especially useful when regarding talk in relation to the social and cultural context in which it occurs: situating a conversation in a time, place and within its physical surroundings.

Sociocultural Discourse Analysis can be used in the analysis of dialogic talk in a social context to assist us in understanding 'how people use talk to think together' (Littleton and Mercer, 2013, p.12). Other types of discourse analysis focus on other

aspects of talk, communication and interaction. Conversation Analysis (CA) is a research tradition rooted in ethnomethodology (Vaughan, 2012). Conversation analysis can be employed in the study of the organization of conversation; 'it is a disciplined way of studying the local organization of interacted episodes' (ten Have, undated). CA differs in function to SCDA in that it rarely details the research situation, context or participants in which the conversation was constructed (ten Have, undated). Linguistic analysis has a primary focus on analysing and understanding the structure of human languages such as the grammatical, phonological and semantic structure of language at a given point in time *without* consideration of time or place, thus the language structure is analysed in isolation of contextual factors (Heine and Narrog, 2009).

Sociocultural Discourse Analysis is discussed as an analytical tool in the next subsection.

5.4.1 Sociocultural Discourse Analysis

Mercer describes Sociocultural Discourse Analysis (SCDA) as 'the analysis of classroom talk...which focuses on the use of language as a social mode of thinking' (2004, p.137). SCDA is informed by sociocultural theory and is used in conjunction with qualitative data collected methods in the form of observations in naturalistic contexts. SCDA is 'expressly based... on the Vygotskyian conception of language as both a cultural and a psychological tool' (Mercer, 2004). SCDA is designed specifically to 'understand how spoken language is used as a tool for thinking collectively' (Mercer, 2004).

As discussed by Vaughan (2012), the differing approaches of discourse analysis will suit some situation, issues and research questions better than others and a researcher will have to choose which discourse analysis approach will be most appropriate for their study. Mercer agrees that a wide range of methods for analysing talk are available and a researcher has to choose the method they deem most suitable for their investigation based upon the following:

- How well the method serves the investigative interests of the researcher
- How adequately the method embodies the researcher's theoretical conception of language in use
- How well the method embodies the researcher's beliefs about what constitutes valid empirical evidence

(based on Mercer, 2004, p.138)

I have chosen to adopt a SCDA approach in my analysis for a number of reasons. As discussed by Vaughan 'the findings a researcher might arrive at by using a particular discourse analytic approach are inextricably linked to the theory that underlies their method' (2012, p.272). Situated within social-cultural theory I argue the context in which the dialogue is situated to be a crucial factor in the interaction that occurs. Talk cannot be separated from the context of the observation and so the two are a coherent unity. Studying talk without context would run counter to the fundamental view of the social-culturalist on how talk is constructed. The methods of analysis employed in SCDA qualitative approach are in-keeping with in-depth analysis of conversations where an exploratory, inductive approach to inquiry is being employed.

SCDA is a preferred method of analysis in numerous social-cultural framed empirical studies into how individuals think together, particularly in formal education settings in classroom environments (and more specifically the research conducted by Mercer, Littleton and colleagues). However, this approach is less well associated with research studies investigating mother and pre-school problem-solving activity, which tend to favour more traditional methods of analysis (based on Wood and Middleton, 1975) using pre-determined coding. Despite a current lack of use of SCDA in mother and child dialogues, Mercer argues that the approach 'has relevance to the study of collective thinking activities' outside formal education contexts (2004, p.166). The use of SCDA to explore the dialogues of parent and pre-school child is, until now, unexplored. However, I have chosen this method because I consider it appropriate for addressing my research questions in line with my ontological and epistemological beliefs and in-keeping with the research paradigm within which I have positioned my research (Mercer, 2004). Utilising SCDA as an analytic tool to investigate parent-child dialogues will contribute to literature both in terms of methodology and provide new insight into how meaning is co-constructed between parent and child.

5.4.2 Doing SCDA data analysis

SCDA can use both qualitative and quantitative methods of analysing talk (Littleton and Mercer, 2013; Twiner, 2011; Wegerif and Mercer, 1997). Quantitative SCDA often involves the use of coding schemes and pre-determined categories to examine patterns in talk. This method of SCDA is beneficial for examining large quantities of data for systematic comparison against set criteria (Wegerif and

Mercer, 1997). However, this quantitative method has limitations as it does not offer any way of investigating how the context of talk develops over time. This, in turn, leaves the method vulnerable to criticism for depriving talk of its essential contextual roots. A quantitative approach was an inappropriate method for my study primarily because it does not support my ontological and epistemological beliefs and interpretivist study design. I am conducting an inductive, exploratory study where I anticipate the themes of my analysis to be constructed within the data I have interpreted. This is at odds with quantitative analysis involving a 'pre-established set of categories' (Wegerif and Mercer, 1997, p.273).

Qualitative SCDA is a particularly useful analytic tool when a researcher is conducting inductive research because it accommodates the open-ended approach needed for tagging issues of interest, identifying potential patterns in the issues of interest and verifying patterns by re-visiting observations. This type of analysis was required in my study as I had not embarked on my research with pre-conceived ideas (Glaser and Strauss, 1967) of how dialogic spaces between mother and pre-school child were opened, widened and deepened. Rather, I intended to explore this area and I presumed I would construct themes as my analysis progressed.

Mercer argues that in qualitative SCDA 'categories used are often generated through the analysis: they are outcomes, not prior assumptions brought in to sort the data' (2004, p.142).

A qualitative SCDA approach adopts an interpretive form of analysis. Transcribed conversations are carefully examined for particular episodes of interactions that can be used to help the researcher understand and describe how knowledge and

understanding are created in joint interaction (Littleton and Mercer, 2013). The qualitative approach to SCDA allows for the examination of content and context in relation to talk, a central consideration when analysing talk co-constructed between individuals (Bakhtin, 1986). As Mercer (2004, p.146) discusses in the context of classroom talk between teachers, students and peers,

‘[w]e have had no wish to reduce the data of conversation to a categorical tally, because such a move into abstracted data could not maintain the crucial involvement with the contextualised, dynamic nature of talk which is at the heart of our sociocultural discourse analysis’

Qualitative methods of SCDA analysis are often characterised in the author’s writing as exemplars of transcript followed by a detailed analysis of what is occurring in the extract or ‘associated analytic commentaries’ (Twiner, Littleton, Coffin and Whitelock, 2014). This allows for utterance to be considered in relation to surrounding utterance rather than alone (Bakhtin, 1986).

There are some criticisms of qualitative SCDA. A qualitative style of SCDA is not so suited to the examination of a large corpus of data due to its time-consuming nature (Mercer, 2004). However, it can be relevant for analysing smaller studies where relatively few cases are considered in detail, as is the case in my case study design. Qualitative SCDA is also criticized for its interpretive nature. I do not, however, consider this to be a negative aspect of qualitative analysis as an exploratory, interpretivist analysis can uncover new and exciting insights into how we perceive the social world around us. No SCDA method of analysis is totally free from interpretation as a researcher’s subjective opinions will be present in any form

of analysis (Wegerif and Mercer, 1997). To summarise, using the analytical tool of Sociocultural Discourse Analysis permits a researcher to:

- Situate their research within sociocultural theory
- Address research questions in the context in which the data was recorded
- Examine under-developed lines of inquiry
- Explore occurrences in data from an open-minded, tolerant and receptive perspective.

The use of qualitative SCDA methodology is ideally suited to my research which is centrally concerned with exploring how dialogic space is opened, widened and deepened in parent and pre-school child dialogues from a socio-cultural theoretical perspective. As considering parent and child interaction through the lens of dialogic theory is an under-developed area, the study is exploratory in nature. I did not set out with pre-determined outcomes rather I constructed my analysis based upon the data I had collected.

5.4.3 Transcription

Although my video-footage provided a permanent copy of the dyadic interactions, the footage alone was not readily amenable to analysis. For this reason, I needed to transcribe the visual data. It is well documented that transcription is the first stage of analysis despite its guise as an interconnecting stage bridging the gap between raw data collection and data analysis (Hammersley, 2010; Freebody, 2003). The decisions I made regarding what to include and what not to include would have a profound impact on the subsequent analysis. As I worked with the video-recordings in the process of transcription I connected with the detail contained in the video-

footage far more than I had done when simply watching back the recordings. As stated by Edwards: 'it is simply impossible to hold in mind the transient, highly multidimensional and often overlapping events of an interaction as they unfold in real time'(2001, p.321).

Edwards (2001) argues that the choice of the most suitable transcription conventions will be dependent on the theoretical framework in which the research is situated, the research questions and the nature of the interaction. I included all audible talk and choose to record basic conventions such as interruption, overlapping talk and pauses in speech. Pause was included as it indicates the temporal nature of spoken language (Edwards, 1993). Noting that a pause is 'short' or 'long' can be subjective as it depends on the transcriber's opinion of what a short or long pause might be (Edwards, 1993). Therefore, I included the time of pauses or silences, to the nearest second.

I used standard punctuation to make my transcripts more readable for my own benefit and for the benefit of my audience. I have not, however, included transcription conventions such as intonation, emphasis or elongated sounds, pitch, amplitude and pace of talk as I do not intend to investigate these areas of interaction. A reader of my transcripts may feel all of my participants spoke with Received Pronunciation (RP) but this is not the case. Regional dialects were present in the talk of my participants but I have not included specific pronunciation techniques such as rolling consonants or harsh vowel sounds that can be attributed to accent. This is because this aspect of language is irrelevant to this study. I have,

however, included obvious variances such as ‘coz’ for ‘because’ and ‘ya’ for ‘you’ as and when necessary to aid the flow of the conversation.

I have included contextual information, such as participants picking up wooden blocks, to aid myself and my audience in the flow of talk and because talk should not be stripped of its contextual relevance (Bakhtin, 1986).

The conventions I have followed in transcribing my raw data are as follows:

Table 5.1 Transcription conventions and explanations

Convention	Explanation
//	interruption
[beginning of overlapping talk
]	end of overlapping talk
(talk)	transcriber’s best guess at difficult-to-translate talk
((comment))	transcriber’s comment about talk or actions observed at time of talk
(.)	a brief untimed pause
(2)	a pause of two seconds
()	untranscribable talk
XXX	a child’s name has been spoken

(adapted from Freebody, 2003)

The conventions I have used in my transcription process situates my transcribed data comfortably within the sociocultural framework in which my research is set. They emphasise the central role of talk in meaning making but also acknowledge the complementary roles of non-verbal communication and context in the communication process. I have to acknowledge that my transcriptions are not an objective unity. As discussed by Edwards (2001, p.321), transcriptions are far from being unbiased, exhaustive and objective accounts of raw data rather they are interpretive and set within the methodology of the research study. Despite my best efforts to produce transcriptions that fairly represent what happened in the observations I would never be able to replicate the exact events as they naturally unfolded. Hammersley (2010) argues that there can never be a correct transcription of any audio- or video-recording rather the process is always a construct based on selectivity and interpretation.

The transcriptions of the observational data provided me with a workable form of data (interpreted through my gaze) to begin analysis, alongside the actual video-recordings of the observations, my field notes from the day of each observation and my research diary containing my thought and reflections. These four forms of data were used in my analysis to complement each other and build up a deeper understanding of the phenomenon. The transcriptions generated were then used in my thematic analysis.

5.5 Thematic analysis

The analysis in this thesis was inductive. I used thematic analysis in order to construct a pattern in seemingly random information (Boyatzis, 1990). Lapadat

(2010) describes thematic analysis as a 'systematic approach to the analysis of qualitative data that involves identifying themes or patterns of cultural meaning. I constructed the themes for analysis from the transcripts of the observational data. After transcribing a proportion of my observations I began to observe repetitions of incidences occurring in the data that I thought may be relevant in addressing my research questions. I shall call these incidences 'areas of interest'. Repetition of incidences was important as I did not want to focus on a vivid but isolated incident that occurred in one observation. Rather, to address my research question, areas of interest needed to occur in numerous different dialogues so that an interpretation of how these areas of interest opened, widened or deepened dialogic space could be made. At this very early stage of analysis I simply jotted down, in my research diary, areas of interest that had the potential of becoming themes. These are replicated in Extract 5.1 below.

Extract 5.1: Transcription Analysis – Emerging Themes

Pauses-

MC2 (1), Mother pausing after asking questions

MC3(1), Mother pausing after questioning child

MC5(1), Mother pausing between sentences, possible waiting for child to respond??

MC3(1), Child pausing (X2)

MC4(1)Child pausing, thinking?? During activity

Resources-

MC3(1) Tee-shirt,

MC3(1) Table,

MC3(1) Hearts,

MC7(1) Scarf,

MC14(1) favourite colour,

MC9(2) Nanny's dog,

MC8(2) Daddy's car,

MC9(1) Clothes,

MC2(1) Glass

These were my initial areas of interest in relation to how dialogic space is *opened* and *deepened* between mother and pre-school child whilst engaged in focused activity; however, I did not find areas of interest regarding widening of dialogic space. As I have discussed previously, my research was inductive and thus these themes were constructed *from* the transcripts as I was producing them. Working from a sociocultural theoretical perspective, I understood that talk is never separate from the context in which it is set (Mercer, 2000). Conducting SCDA enabled me to consider the use of pause and resources in relation to the talk. Through the process of transcribing my video-footage numerous instances occurred, in separate observations, which involved the dyad utilising pause alongside talk in their interaction or discussing colour or size in relation to objects. In this early stage of

analysis, I tried to write down in my research diary what I thought I noticed emerging. The extract below represents the tentative nature of this process.

Extract 5.2: Research diary dated 13/8/14 titled ‘Primary Analysis’

Pausing after question (the mother), child- pausing when talking, the pause is part of the ‘dance’ of perspectives, as important as words??

Similarly I jotted down my thoughts about the use of resources:

Extract 5.3: Research diary dated 13/8/14 titled ‘Primary Analysis’

Right then, here goes, my idea is concerned with how individuals use objects around them in conjunction with their talk to create spaces for thinking. Has scope for extending theory. I have seen examples of objects in the room being used, objects brought to the obs from home by either individual in the dyad and objects that aren’t actually present, so in their shared knowledge.

I remember the need to start my first sentence with ‘Right then, here goes’ so I had a starting point rather than a blank piece of paper to let my ideas flow from.

Getting these first ideas down on paper and thus the process of trying to order my initial areas of interest was far trickier than I had imagined. These thoughts, however, were the seeds of my themes that germinated and grew.

5.5.1 Thematic analysis of areas of interest

In order to carry out a systematic analysis of the data I had collected I chose to adopt thematic analysis for ‘identifying, analysing and reporting patterns (themes) within data’ (Braun and Clarke, 2006, p.79). Thematic analysis can be seen as a

foundational method of qualitative analysis. It is not always regarded as a specific method but an analytical tool that can be used across different methods of analysis (Braun and Clarke, 2006). Thematic analysis is often ‘used without being specifically described’ (Boyatzis, 1998, p.6). In this thesis I follow the synthesizing strategy of Braun and Clarke’s (2006) approach. I shall use thematic analysis as an analytical tool to identify themes that I can subsequently be used in my SCDA.

Thematic analysis can be used within different theoretical approaches as it ‘is not wedded to any pre-existing theoretical framework’, however, ‘a good thematic analysis will make transparent how they represent reality (Braun and Clarke, 2006, p.81). I used thematic analysis within sociocultural theory and in line with my ontological and epistemological positioning of how understanding is constructed between individuals. This is consistent with my case study approach and methods of data collection. In relation to data collection, Braun and Clarke (2006) state that there needs to be a distinction made between data corpus and data set. In line with Braun and Clarke, my data corpus is the entirety of the data that I collected within my case study design; my data set is the data I shall use in this particular part of my analysis. Table 5.2 represents the data collected and analysed in the thematic analysis.

Table 5.2 Data collected and analysed in thematic analysis

Data Collected	Data analysed
Video and audio recording of: <ul style="list-style-type: none"> • 13 observations of mother and 	Transcriptions of: <ul style="list-style-type: none"> • 13 observations of mother and

<p>child whilst engaged in a colour focused activity</p> <ul style="list-style-type: none"> • 13 observations of mother and child whilst engaged in a sized focused activity 	<p>child whilst engaged in a colour focused activity</p> <ul style="list-style-type: none"> • 13 observations of mother and child whilst engaged in a sized focused activity
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Braun and Clarke state there are six phases of thematic analysis:

- Familiarizing yourself with the data
- Generating initial codes
- Searching for themes
- Reviewing themes
- Defining and naming themes
- Producing the report

These six phases of thematic analysis were followed in order to produce a systematic way of constructing themes from the transcripts of the observation data set. I had familiarised myself with the data and noted areas of interest during the transcription process. My areas of interest were 'resources' and 'pauses' in speech.

In the next phase of thematic analysis, I systematically worked through all transcripts locating dialogue that contained areas of interest (resources and pauses). All dialogue that I interpreted as being related to resources or pause became an item of interest (Braun and Clarke, 2006). The term code did not lie easy within my methodology. I considered coding to be associated with pre-determined

coding schemes and categorising data into tallies (Mercer, 2004); a process I was determined to avoid based on the evaluation of scaffolding literature. Thus, in my initial stages of thematic analysis I used coloured pens to highlight items of interest (Braun and Clarke, 2006) rather than using letter or number codes that would distance my items of interest from the context in which they were present. By using highlighting pens each item of interest remained within the dialogue that it was situated but was instantly recognised as possibly having significance. As my analysis progressed items of interest could have several colours of highlighter pen, each colour representing a different way of considering the utterance in a broad or narrow sense. As discussed in Chapter 3, the items of interest in my analysis were not analytically divorced from one another. Items of interest relating to pause and resources may be found in one single utterance or group of utterances.

Kumpulainen and Wray state that: 'given that an utterance may serve multiple functions, more than one function can be recorded for each utterance (2002, p.37).

In subsequent stages of re-visiting my transcripts I used post-it notes (Braun and Clarke, 2006) to add memos regarding the highlighted items of interest, bring them together into possible groups, and separating distinct issues from each other. Post-it notes were a good resource as they could easily be stuck onto the transcription page so were immediately visible at further stages of analysis alongside my original transcriptions. Thus, items of interest could be considered in the fuller picture of the dialogue, consistent with my single (embedded) case study approach. Post-it notes could then be easily removed for collating and synthesizing purposes.

I carried out my systematic analysis in accordance with Braun and Clarke's (2006) criteria for good thematic analysis. I will detail how I addressed each point on the check list below in Table 5.3.

Table 5.3 Braun and Clarke's (2006) 15 point check list for good thematic analysis

Process	Criteria	How I addressed this in my thematic analysis
Transcription	Data transcribed to appropriate level of detail and checked against tapes for accuracy	Verbal and non-verbal communication, pause and context included in transcripts All observations transcribed and checked for accuracy Initial areas of interest identified
Coding	Each data item has been given equal attention in the coding process Themes not created from vivid examples but thorough, inclusive and comprehensive All relevant themes for each theme	All dialogues were manually highlighted using coloured pens. All transcripts systematically worked through, no skipping of data.

	<p>collated</p> <p>Themes checked against each other and original data set</p> <p>Themes internally coherent, consistent and distinctive</p>	<p>Entire data set 'coded' using highlighter pens</p> <p>Patterns documented on post-it notes so analysis could remain close to original transcriptions</p>
Analysis	<p>Data has been analysed rather than paraphrase or described</p> <p>Analysis and data match each other</p> <p>Analysis tells a convincing and well-organized story about data and topic</p> <p>Balance of analytic narrative and illustrative extracts</p>	<p>Collated all relevant highlighted items into potential themes</p> <p>Thematic maps produced of initial, developing and final themes (Figures 5.1, 5.2 and 5.3)</p> <p>Highlighted items revisited to ensure all fit themes/themes do not overlap.</p>
Overall	<p>Enough time allocated to complete all phases of analysis</p>	<p>All areas of transcription, coding and analysis were completed fully</p>
Written	<p>The assumptions about, and specific</p>	<p>My use of thematic</p>

report	<p>approach to, thematic analysis are clearly explicated</p> <p>There is a good fit between what you claim you do, and what you show you have done</p> <p>Language and concepts used in the report are consistent with the epistemological position of the analysis</p> <p>Researcher positioned as active in the research process; themes do not just 'emerge'</p>	<p>analysis for constructing themes in SCDA was clearly defined.</p> <p>Processes of analysis claimed to have been carried out documented in Figures 5.1-5.3</p> <p>Thematic analysis was consistent with ontological and epistemological positioning, case study approach and theoretical background of sociocultural theory</p> <p>Themes were constructed from data consistent with social constructionist and interpretivist research paradigms.</p>
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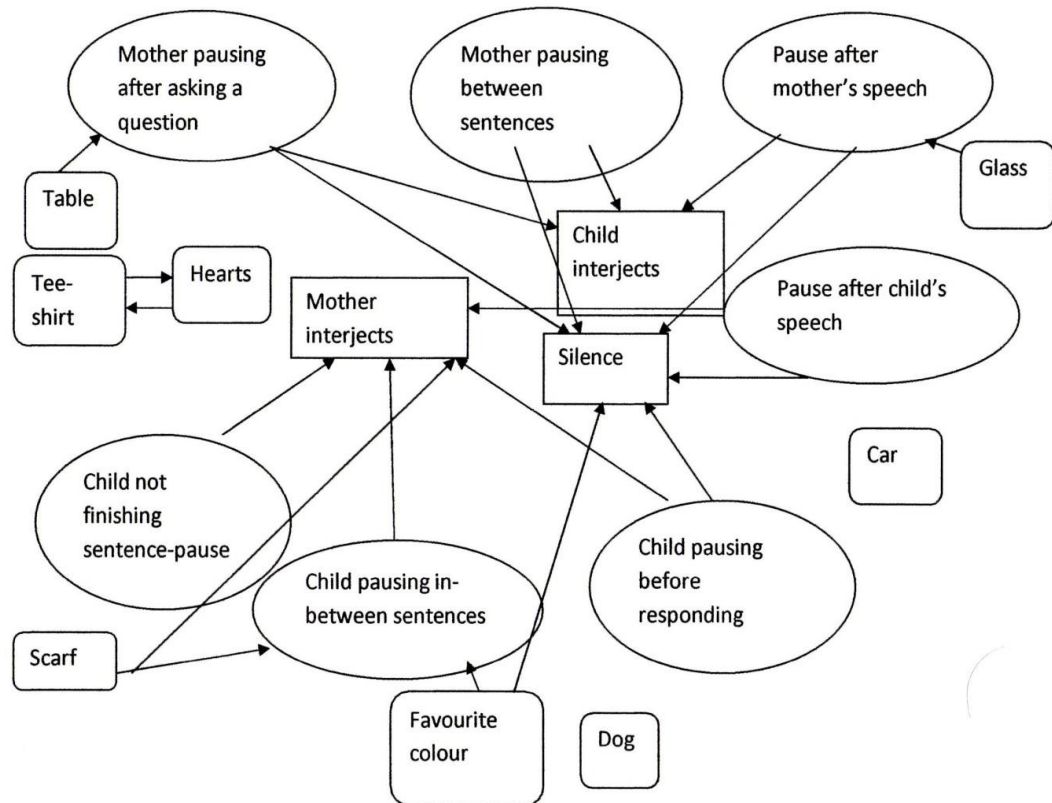
5.5.2 Thematic mapping: initial areas of interest for final themes

As stated by Braun and Clarke (2006), thematic maps are a good resource for organising and developing initial items of interest into themes as units of analysis.

My first thematic map contained my initial thoughts about the relationship between highlighted items and how they might fit into themes, represented in Figure 5.1.

Braun and Clarke (2006) state thematic analysis can be inductive, data lead, or deductive, led by theory. As my issues of interest were constructed during my initial engagement with my data set (observational transcriptions) I consider my thematic analysis to be inductive. However, the research does not exist in a vacuum and the relationship between the theories I have engaged with, the empirical studies I have reviewed and my methodology have all shaped the process of analysis.

Figure 5.1 Initial thematic map

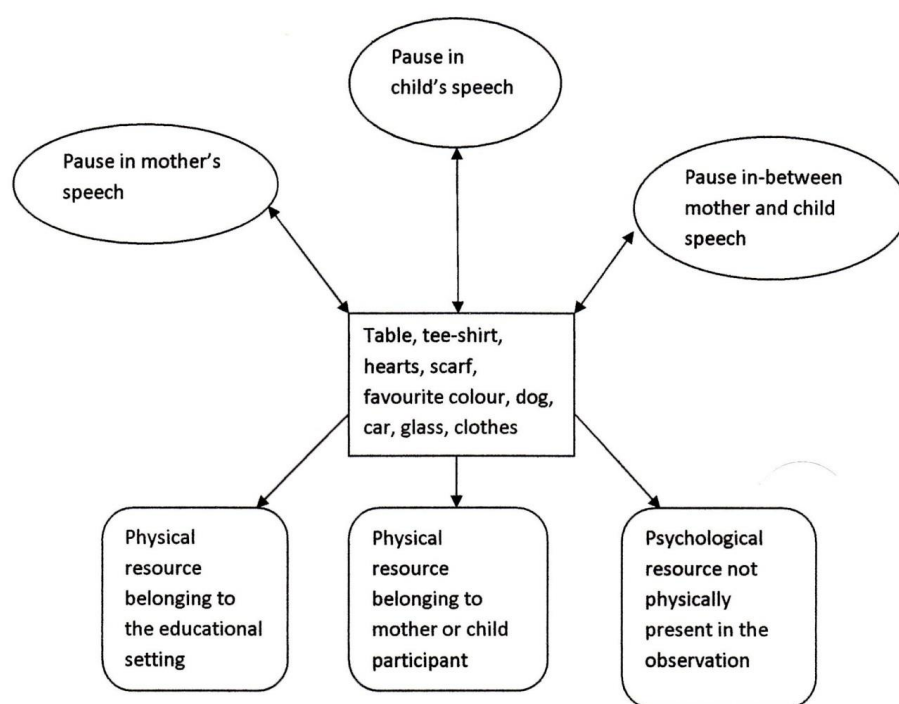


This initial map provides a visual aid to explore the relationship between pauses and different resources used within the dialogue. From the initial map it was possible to visualise how, through the use of dialogue, dyads utilised pause and resources in discussing colour and size.

From the initial thematic mapping, I then progressed along two separate but merging lines of checking the themes and data set. Firstly, I reviewed the themes at the level of the highlighted data extracts. In accordance with Braun and Clarke (2006), I read all collated extracts for each theme and considered whether they appear to form a coherent pattern or if some highlighted items did not fit in the

themes I had placed them in. This involved a process of making judgements about my developing themes and moving items, continually comparing highlighted data against developing themes. As discussed by Braun and Clarke (2006), at the beginning of thematic analysis it is important not to simply discard issues as they may have further relevance as the thematic analysis progresses and issues that do not appear to have a theme but may be relevant can be classed as miscellaneous. The outcome of this process of refinement is detailed in Figure 5.2 below. At this stage of my thematic analysis I was focusing on how specific pauses and resources could be collected together. I considered how each item on my initial thematic map was utilised by the mother and child in the dialogue.

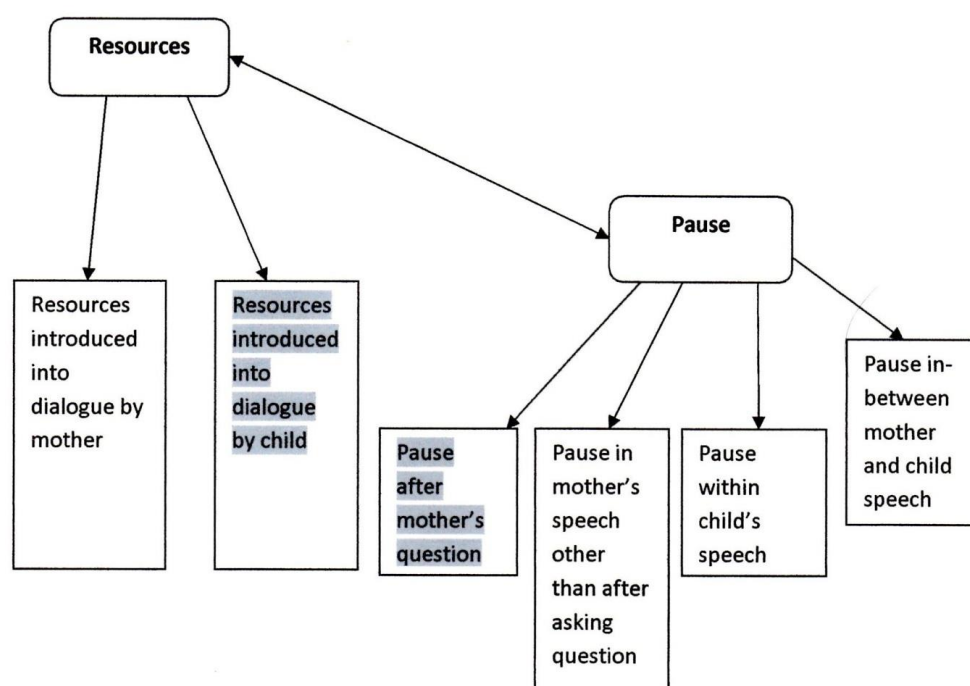
Figure 5.2 Developing thematic map



Secondly, I needed to consider how the themes represented the data set. This was done for purposes of validity; reflecting the whole set. Items of interest can be noticed because they are vivid, but not necessarily repeated in the data set and so do not form patterns within the data. Focusing on single outstanding instances is not what creating themes is about; rather the visiting and re-visiting of highlighted items and themes is a progression reiterating the 'ongoing, organic process' (Braun and Clarke, 2006, p.91). However, Braun and Clarke issue a word of warning: 'coding data and generating themes could go on *ad infinitum*, [and so] it is important not to get over-enthusiastic with endless recoding' (2006, p.92). In producing my final thematic map there was a certain amount of movement in my developing themes. For example, in my developing thematic map (Figure 5.2) I had grouped together all instances of pause in the mother's speech. However, on re-visiting my highlighted items and themes I considered that the use of pause in relation to the mother's utterance could perform differing functions dependent on the utterance. For this reason, I re-grouped this theme. Once a satisfactory thematic map has been produced, Figure 5.3, it is necessary to stop the ongoing revisiting of highlighted items and 'define and refine' the themes. Braun and Clarke discuss the process of defining and refining the themes as: 'identifying the 'essence' of what each theme is about ... and determining what aspect of the data each represents (2006, p.92). It is necessary to consider the themes themselves and each theme in relation to the others and identify any subthemes; 'essentially themes-within-a-theme' (Braun and Clarke, 2006, p.92). For ease of identification the themes in Figure 5.3 are in bold lettering and the sub-themes are in normal lettering. Sub-themes 'can be useful for giving structure to a particularly large and complex

theme' (Braun and Clarke, 2006, p.92). In this final stage of defining themes consideration was given to how the themes were important to my research questions and to this thesis as a whole. As my central concern was the opening, widening and deepening of dialogic space I redefined the themes in relation to how the mother and child participants utilised the themes in their dialogue. Thus, the theme of 'Resources' was framed by how each interlocutor used a contextual resource in their utterance to discuss the concepts under question. Similarly, the theme of 'Pause' was framed by how pause was used in between the interlocutors to structure their co-construction of the dialogue about the concepts under question.

Figure 5.3 Final thematic map



The sub-themes highlighted in grey are those that are presented in the analysis Chapters (6 and 7) of this thesis.

5.5.3 Defining themes and sub-themes

Braun and Clarke state that: 'it is important by the end of this phase you can clearly define what your themes are and what they are not' (2006, p.92). I define my themes and sub-themes below:

- Themes

Pause: A gap in verbal communication, recorded in the transcriptions (number of seconds) e.g. (1), (2)

Resource: Any artefact/object/effect that is talked about between mother and child, physically or psychologically present in the dialogue

- Sub-themes

I define 'pause after mother's question' as a timed pause in-between the mother asking a question and then the mother providing another utterance (which also could be, but not necessarily another question). I define 'pause in mother's speech other than after asking question' as a timed pause in the transcribed data where the mother speaks the utterance before and after the pause, but the utterance before the pause is not a question. I define 'pause within child's speech' as a timed pause in the transcribed data where the child speaks the utterance before and after the pause. Consequently, 'pause in-between mother and child speech' is defined as a pause that is in between the utterances by both mother and child. In this sub-theme it is irrelevant if the mother or child offer the utterance before or after the pause but both must offer an utterance (either directly before or directly after the pause). The analysis presented in Chapter 6 foregrounds the sub-theme of 'pause after

mother's question'; the other three sub-themes are not reported on in this thesis, but provide findings that can be interpreted in future research.

I define 'resource introduced into dialogue by mother' as an artefact/object/effect that was first spoken about by the mother in the dialogue; similarly I define 'resource introduced into dialogue by child' as an artefact/object/effect that was first spoken about by the child in the dialogue. My analysis findings in relation to the theme of resources are presented in Chapter 7.

5.5.4 Issues with analytical rigour

It is necessary to consider the reliability of my analytical method and claims made from my analysis. I have been transparent with my audience in my approach to transcription. This provides my audience with a full picture of what I chose to include and exclude from the analytic process of transcription. Braun and Clarke state: 'if we do not know how people went about analysing their data, or what assumptions informed their analysis, it is difficult to evaluate their research' (2006, p.80). Reliability continued through all analytical stages in the rigorous approach I took to the analysis process as outlined here.

Studies using a SCDA method of analysis can gain reliability from using concordance software in their analysis (Wegerif and Mercer, 1997). I have chosen not to use this technique due to the ambiguity of terms used in my analysis. In small case studies, such as mine, a systematic, manual analysis is achievable. For example, one area of interest was the use of resources within dialogue to deepen dialogic space in joint meaning making. The search term 'resource' would not be sufficient in identifying the range of resources that mother and child utilised in their dialogues.

Nevertheless, searching for the same resource over all transcripts would only indicate where that particular resource had been discussed in dialogue and not the use of other resources. For this reason a systematic, manual search of all observation transcripts provided a more reliable method of identifying areas of interest.

5.6 Summary

In this chapter I have discussed my choices regarding my analytical decisions. I began the chapter with a critique of analytical tools consistent with the metaphor of scaffolding and provided my justifications for using a Sociocultural Discourse Analysis (SCDA). I then progressed to discussing the different methods used in SCDA and located my analysis in a qualitative, interpretivist approach to the SCDA analytical tool. With the method of analysis established, I then moved on to discuss how I conducted the analysis. I have explained the important choices I made with regard to transcribing my observation data and how this process actually became integrated in the analysis process. I then presented an account of how I have used thematic analysis as an analytical tool to construct themes and sub-themes for my SCDA. In the next two chapters I will present findings from my SCDA in relation to the themes I have identified in thematic analysis, my research questions and sociocultural theory.

Chapter 6: Dialogic space with pre-school children opened by the sensitive utility of question and pause

6.1 Introduction

In this chapter, I shall present my analysis and offer my extension of dialogic space theory. I foreground the mother's use of pause, the silences in-between spoken words, during her questioning in dyadic interactions. I argue that the role of pause is important because exploration of the role of the mother's questions alone is insufficient in explaining how dialogic space is opened. My analysis will be used as evidence to address my overarching research question: Can dialogic space be opened, widened and deepened during parent-child dialogues that focus on discussing the concepts of colour and size? Specifically, I shall evidence how pause is used alongside questions to open dialogic space. Previous studies have considered how non-verbal means of communication alongside physical cultural tools can be employed to create and maintain learning activities with older children. For example, Kerawalla *et al.* (2012) investigated how multiple modes of communication such as bodily location, gaze and gesture were used to constitute and sustain learning activities outside the classroom on a geography field trip. However, the utility of pause alongside utterance does not appear to have been considered in previous literature about dialogic space. In this chapter, I build an argument that the speaker's and listener's mutual use of pause mediates opportunities for the co-construction of meaning about size and colour. The consideration of the use of pause offers an extension to dialogic space theory and

more specifically enables the exploration of a new way in which dialogic space can be opened during dyadic interactions in the early years in mother and pre-school dialogues. Due to the lengthy commentary required in relation to each exemplar, in this chapter I present two exemplars of transcription for presentation. Further exemplars of transcription are supplied in Appendix K. The two exemplars of transcription are representative of the data corpus as a whole; a quantitative count of the occurrences of the sub-theme of 'pause after mother's question' is presented as Appendix M.

6.2 Opening dialogic space through questions and pauses

Firstly, I present Extract 6.1, an exemplar of dialogue that will be used to evidence the utility of pause in relation to questions in opening dialogic space.

Extract 6.1: Transcription Extract from observation MC3 (1) Line Numbers 83-98

- 83 M: Right then shall we put all of the red ones over here? ((points))(1). Can you see
84 any red ones?(5)XXX can[you?]
- 85 C: [This] one, this one red ((picks up a red block))
- 86 M: Well done XXX your wicked! Can you find any more?
- 87 C: ((looking at blocks in centre of table, picks up blue block))giggles
- 88 M: Is that a red one? ((mocking tone, playfully puts hands on hips))
- 89 C: No ((laughs))
- 90 M: Why is that not a red block?(1)

- 91 C: Erm, coz it's not
- 92 M: But do you know why it's not?(1)
- 93 C: ((picks up initial red block)) coz this one a red one
- 94 M: That's right that one is a red one. So (5) ((picks up red block and blue block)) if
- 95 this one is red why is this one not red?
- 96 C: It's a different colour ((giggles))
- 97 M: Can you tell me what colours they are? (3) can you point to the blue one? (2) tell
- 98 me which one's blue (.) XXX

Considering the dyadic interaction through the lens of dialogic space, it is possible to explore how the mother and child are immersed in the dialogue in a 'continuous chain of questions and answers', where the questions being asked and the answers supplied do not end the dialogue but promote the dialogue to continue (Wegerif, 2010b, p.25). The mother's questions relating to colour flow from one to another. During this short exchange the mother and child appear to be immersed in a space of dialogue, negotiating together to successfully place blocks in relation to their colour. Crucially, at the beginning of the extract the child selects an incorrect block colour (blue instead of red) but through their shared meaning-making the child is supported in choosing a red block. I argue that this extract provides evidence of a 'dynamic continuous emergence of meaning' (Wegerif, 2011b, p.180) with the mother and child immersed in meaning making through dialogue; a dialogic space between mother and child. This is of theoretical significance as, up until now, the creation of dialogic space by a pre-school aged child and another interlocutor has not been considered.

The use of questions in dialogic space (Wegerif, 2010b), as a means of peers co-constructing new understanding through talk (Littleton and Mercer, 2013; Mercer and Littleton 2007) together with shared sustained thinking (Early Education, 2012) indicates that questions in talk are a vital part of how interactions are co-constructed so speaker and listener can exchange their perceptions on the topic under consideration. Questions in dialogic exchanges can 'encourage children to make explicit their thoughts, reasons and knowledge and share them' and provide 'opportunities for children to make longer contributions in which they express their current state of understanding' (Rojas-Drummond and Mercer, 2003, p.101).

However, through analyses of the dialogues between mother and child, such as that in Extract 6.1, I argue that the role of questioning alone may not be sufficient in explaining how dialogic space is opened in parent and child meaning making.

The mother's contributions in Extract 6.1 can be partially explained using Wegerif's (2011b) dialogic theory. Firstly, the mother knows her intended audience before she begins to speak; she knows her addressee is her child and thus shapes her utterance around this knowledge. Wegerif calls this an 'inside-outness outside-inness of dialogic' as both the speaker and the respondent are aware of the person they are speaking to and are already predicting a possible response from them (2011b, p.180). However, current dialogic theory does not explain the mother's use of pause after posing a question. This feature could be explained in terms of the mother expecting a response from the child; this is what she has anticipated that her addressee will do so she pauses to let her child respond. When the response from the child does not happen instantly she waits a few moments to see if a reply is forthcoming. When a response is not heard she tries another utterance "Can you see any red ones?" (line 83-84), again pausing after her utterance, waiting for a response. The pause is inviting the child to make a contribution to the dialogue; the pause potentially opens up dialogic space by creating an opportunity to discuss the colour of the blocks together. Therefore, the mother's use of pause after a question has the potential to open dialogic space where the concept of colour can be jointly discussed.

In lines 83-84 of Extract 6.1 the mother is making a suggestion of where to place the red blocks. She speaks in terms of 'we' indicating that it is her intention for them to

do this together. There is a pause of 1 second and the mother then asks the child if he can see any red blocks; this is then followed by a longer pause of 5 seconds before the mother repeats her request in a shorten form. The same form of utterance was also used by the mother a short while later (lines 97-98). In this utterance, the mother has asked the child a question about the colour blue in three different ways; each time she has paused between the questions. The mother is using questions alongside short episodes of silence to shape her utterance and potentially open dialogic space between herself and her child. By using questions, the mother is encouraging her child 'to take a more active vocal role in...events' (Rojas-Drummond and Mercer, 2003, p.107). However, the mother's use of pause in-between each question also supports the opportunity for the child to contribute as there is an opening in which his/her voice can be heard.

It is difficult for observers/analysts to understand if a pause in dialogue is purposeful or not; for instance drawing of breath, pausing to think what to say next or purposefully awaiting a response from one's interlocutor are all represented by a silence in speech. Pauses in conversations are subjective and can be interpreted in different ways (Edwards, 1993), thus, it is not the pause *per se* that is of relevance in this analysis but the way it is *interpreted* by the interlocutors of the dialogue. The mother whose interaction was considered in Extract 6.1 was asked during the VSRD semi-structured interviews, about her use of pause after posing a question, so that her interpretation could be sought. She said:

“I think I was trying to get XXX to join in with me, to take a part in it, so I was giving him the chance, the opportunity, to join in the conversation.”

(Interview MC3)

The mother's reason for using pause after questions, 'to get XXX to join in with me', suggests that the mother was intentionally pausing when offering her contributions in the dialogue. She was pursuing a dialogue with her child rather than a monologue of just her own voice. By pausing, or remaining silent after a question, the mother is providing the child with opportunity to take a turn in the dialogue regarding the blocks; the mother is attempting to draw the child's voice into the dialogue through moments of silent in her own utterance. Counter to traditional conceptualizations of the mother as teacher and the child as learner, consistent with the metaphor of scaffolding, the evidence provided here suggests that the mother is actively encouraging her child to play a role in the co-construction of the activity. This questions the adequacy of scaffolding for explaining all of the processes that occur during mother-child problem-solving activity. In Extract 6.1 the mother is not simply providing instruction; rather she is using questions and pause to 'guide the development of understanding' about the colours red and blue (Rojas-Drummond and Mercer, 2003, p.106). This guidance is not static; rather the mother's questions are continually constructed in light of the child's response or non-response. In this sense, the mother's utterance can be seen as a type of orchestration, where she is adjusting her questions on a moment-by-moment basis in line with the contribution of her child (Littleton *et al.*, 2010). The child is an active agent in the dialogue,

through his/her use of voice and silence; rather than a passive recipient of instruction.

If the mother were to ask questions but not pause after the question there would be little opportunity for the child to offer their contribution. If the mother views her child's input in a tokenistic manner (Brooker, 2011) then she may not see any need to pause for the child's response (or even asking the question in the first place) as the child has nothing of value to add to the interaction. However, the mother's use of pause after questions indicates that the mother *does* value the child's input and is awaiting a response from him. Moreover, the mother's use of pause after questions suggests that she is actively seeking the child's contribution to the dialogue; anticipating her child's input in the activity; casting uncertainty onto the assumptions of the traditional conceptualizations of the agency of the child in problem-solving activity.

The mother's approach to questioning can be viewed as a contingent act. Contingency is a concept associated with the metaphor of maternal scaffolding (Wood, Wood and Middleton, 1978; Wood, Bruner and Ross, 1976), as discussed in Chapter 2, whereby it is the child's success or failure on task that decreases or increases the level of instruction offered by the mother. The concept of contingency can be mobilised to explain the way in which the mother adapts her utterance based on the response she receives from her child. The mother's contributions are contingent with the child's response. The mother offers questions to her child about the colour red in relation to the blocks; each question is followed by a pause; an opportunity for the child to interject (lines 83-84, 94-95 and 97-98). In this way, the

mother is offering a contribution and awaiting an anticipated response. When the response is not offered by the child, the mother poses another question and awaits a reply. Rather than maintaining a consistent level of information, i.e. repeating the same question over again, the mother is acting contingently with the child's non-responsiveness. The mother's contribution is more than instructional as her utterance is concerned with if her child understands the difference in colour. Rather than the interaction between mother and child being about the completion of the activity; it is opportunity construct meaning together about the concepts of red and blue.

6.2.1 Mutually constructed silences in the mother's speech

In Extract 6.1, there is a sequence of exchanges between mother and child that suggest that her approach of pausing after asking a question does engage the child in the dialogue. In lines 85-93 the two individuals exchange ideas in relation to a red coloured block, opening dialogic space about the colour red. When the offer of joining the dialogue is taken up by the child i.e. the child responds to the mother's question (line 85), the pause that was observed in-between the mother's utterance becomes a pause in-between the mother and child's utterance. To elaborate further, if the mother's offer of contributing to the dialogue is not taken up by the child then the silence is broken by the mother asking another question. If the child does join in the dialogue then the silence is broken by the child's voice. Thus, the pause in the mother's utterance is not created by the mother; rather the pause is constructed by the mother and child in the dialogue. After all, if either mother or child speaks the silence is broken by the spoken word. In this sense, the pause is a

mutually constructed gap in speech because silence is only present in the absence of both interlocutors not speaking.

The mother utilises 'why' questions in her utterance with her child (lines 90, 92 and 95). Rojas-Drummond and Mercer (2003) argue that in classroom settings teacher's use 'why' questions to ask pupils to reason and reflect on what they are doing.

Mercer (2000) argues that in peer groups children use why questions to seek each other's views and elicit reason. Consideration of the utility of a 'why' question is also relevant to mother and child dialogues. The mother, it can be assumed, knows the colour of the wooden blocks and thus must be questioning her child about them for another reason. A constitutive difference in the identity of the mother and child can be identified in the utterances that are exchanged (Wegerif, 2010b). She offers open questions to her child about colour. However, she is not enquiring about a topic she does not know the answer to; instead her questioning, and subsequent use of pause, is to seek the perspectives of the child. Mercer argues that in dialogues that elicit reason there is a 'constant negotiation' (2000, p. 99) between speakers. Negotiation in the asymmetrical relationship of mother and pre-school child requires a temporary shift in the power differential between the dyad. The mother is negotiating control of the activity by asking the child a 'why' question so that the child's reasoning becomes apparent on the social plane of the dialogue. With the child's reasoning becoming explicit in the dialogue (lines 93 and 96) the mother and child co-reason the child's understanding of the colours in question (Mercer, 2000). The mother use of 'why' questions suggest that she is concerned with more than the temporary scaffolding of the present sorting activity; rather she is concerned with the child's understanding of the concepts of red and blue.

Through the use of questions the mother is able to support the child in thinking about the colour of the blocks. The mother's question "but do you know why it's not?" (line 92) provides an opportunity for the two individuals to explore the difference in colour; it provides opening for the child to explain why she thinks the blue block under scrutiny is not red in colour. The child is able to offer their opinion on why the blue block is not red in relation to another block on the table, the initial red block that the child selected correctly (line 93). The dialogue between the mother and child continues with the mother questioning the child's knowledge on the two colours, red and blue. The mother knows the answer herself but, through dialogue, she wants to know what her child thinks. The child's response "it's a different colour" (line 96) brings into the dialogue the opinion that she knows the difference between the two colours. This short exchange (lines 90-96) demonstrates that through the mother's questions and pauses and the child offering her opinions about the colour of the blocks a dialogic space is opened up to discuss colour together.

In summary, by pausing after asking her child a question, the mother encourages the child to join in the joint debate about colour; she is inviting her child into the dialogue. Sometimes the child will join in the dialogue, by providing her opinion. When this occurs the child's perspective deepens the dialogic space opened by the mother's question and pause in relation to colour. At other times the child may not join in the dialogue. Nevertheless, by a strategic use of pause, the mother is providing an opportunity for the dialogue to open up between them; sometimes the dialogue flows from this point, other times it does not. At times, when the dialogue does not flow, such as when the child does not respond, the mother will

ask another question after a pause in order to provide another opening, creating the opportunity for dialogic space to open up. The mother's use of questions and pause suggest that she is concerned with more than providing instruction to sort the wooden blocks; rather the mother seeks the views of her child to guide her child's development of understanding about the colours red and blue. This evidence challenges the assumption that mother and pre-school problem-solving interaction is based upon maternal instruction and guidance. Instead, my analysis suggests that the mother actively seeks opportunities for the child's reasoning to be made explicit, encouraging the child to vocalise her understanding of the concepts under scrutiny.

In the next section, I shall build upon my argument that pre-school children are joint contributors to dialogic space by exploring how mother's provide opportunity for their child to voice their perspectives in dialogic space.

6.3 Prompting the young child's contribution in concept-focused activity

In this section, I shall use an exemplar of transcription from a dyad engaged in a task concerning the concept of 'size' to argue further how the mother's sensitive use of questions and pause opens up the opportunity for the young child's contribution to the activity to be made. I begin with the following exemplar of transcription:

Extract 6.2: Transcription Extract from observation MC5 (2) Line numbers 27-53

- 27 M: Shall we have a look at doing this activity together? (1) I think we could, it looks
28 like something we have done [before]
- 29 C: [The blocks
- 30 M: Yey, the blocks (1) shall we do it together? (2)
- 31 C: Do it together, mummy, we do it together
- 32 M: Okay then, let's make a start. So we are looking for big blocks this time (1) how
33 shall we find the big blocks? (2) What do you think? (1) What do you think we
34 should do (1) to find all the big blocks?
- 35 C: Put them all over here ((moving all blocks towards her body with arm))
- 36 M: we could, (1) we could put them all over there (2) By what's that going to get us?
37 (2) We need to move big blocks away from littlies
- 38 C: You have those ((pushing random blocks toward mother)), sharing mine
- 39 M: Okay but I've got big and littlies over here (1) what have you got over there?
- 40 C: Blocks
- 41 M: Yes, they are blocks. What I mean is, look at these two ((picks up two red blocks,
42 a big and a small block)) blocks (1) can you see they are different?(1)
- 43 C: Yes

44 M: so why are these not the same (1) different? (2)

45 C: Coz you got one of them ((points to big block in mother's hand)) 'n' one of them

46 ((points to small block in mother's hand))

47 M: Big ((brings big block closer to child)) and little ((points)) so then if that's big

48 ((points)) can you find us another one of them (2)

49 C: ((looks at blocks on table)) I got that one ((selects big block))

50 M: now compare it (2) does it match mine? (2) ((brings big block closer to child)) are

51 they the same?(1)

52 C: ((taps block she is holding with one mother is holding)) same, tis the same, (1) as

53 yours mummy

Extract 6.2 begins with the dyad discussing how they are going to organise the activity to sort the big blocks from the small blocks. The mother's contribution to the dialogue consists of questions and pause (lines 32-34). The questions are aimed at her addressee regarding how she (the child) thinks they should organise the block sorting activity. The mother's contribution to the dialogue is not instructional; she is not providing suggestions, solutions or demonstration (Wood and Middleton, 1975). The mother actively poses questions to seek the child's opinion on how the child thinks they should begin the activity. The questions are followed by pause. As argued in Section 6.2, the use of pause is as fundamental as the use of questions in seeking the child's opinion, as the pause provides an opportunity for dialogic space to open between mother and child. This evidence challenges the assumptions asserted by the metaphor of scaffolding into how mother and child interactions support children to become more competent problem-solvers. The mother is not offering instruction on how to structure the task, or this small part of the task. Rather, the mother is actively seeking the *child's* opinions on how to structure the activity.

Through actively seeking the views of her child it can be argued that the mother considers the child as an active contributor in the dialogue regarding the size-focused activity. In considering how the active role of mother and child in dialogue supports the child's understanding of the concept of size Bakhtin's (1981) theories on the authoritative and persuasive voice is beneficial. Authoritative, Magistral dialogue is that most associated with the metaphor of scaffolding and the underpinning notion of Zone of Proximal Development (ZPD) (Cheyne and Tarulli, 1999). The authoritative nature of the dialogue is dependent on the asymmetrical

power relationship between the interlocutor's voices and also the third voice, the voice of authority in the wider social, cultural and historical context of the dialogue (Cheyne and Tarulli, 1999). Investigations that consider how a mother has supported her child in achieving a correct outcome based on the authoritative third voice have limited scope for understanding how meaning is created between interlocutors. Bakhtin asserts that authoritative voice leaves no room for negotiation as the discourse is already 'static and...fully complete' (1981, p.343). As discussed by Scott *et al.* (2010), in relation to classroom dialogues, the voice of authority may constrict the way in which learners are able to make meaning through dialogue. If the dialogue is constructed in a way where exploring ideas is limited the learner's opportunity for thinking about the topic is constrained.

Whilst the voice of authority constrains creative dialogue in problem-solving, the persuasive voice lends itself to ways in which interlocutors can explore meaning-making without the constraints a single correct outcome. In seeking the opinions of the child, through questions and pause (lines 32-34), the mother is providing opportunity for the dyad to creatively consider the activity together. As discussed in Chapter 1, creativity can be defined as when two perspectives come together in a spontaneous way (Wegerif *et al.*, 2010). In seeking the child's views the mother is opening up opportunity for them to discuss the activity creatively in dialogic space, thus enabling them to think about the activity together (Littleton and Mercer, 2013). Rather than using a voice of authority, dictating how the activity should be organised, the mother is open to the views of her child. The mother's use of questions and pause is successful in opening dialogic space as the child makes a suggestion as to how she considers they could start the activity (line 35). The child's

suggestion of placing all the blocks “over here” (line 35) may not have been how the mother was considering organising the activity, as the mother’s contribution to the dialogue in lines 36-37 suggests. However, the mother does not dismiss the child’s suggestion of moving all of the blocks. Rather, the mother questions the child as to why the child considers it a good idea.

The mother’s questioning of the child’s view on how to structure the activity can be regarded as exploratory talk, a means of the mother exploring why the child has made such a suggestion (Mercer, 1995). Rather than the mother instantly dismissing the idea (disputational talk) or going along with the suggestion without question (cumulative talk) the mother acknowledges the child’s view but questions the child as to why it would be useful in achieving their goal (lines 36-37). In this way, the mother is modelling effective verbal reasoning skills in the dialogue with her child (Mercer and Littleton, 2007). The mother uses her contribution in the dialogue to find out why the child considers placing all of the blocks together a good idea.

Consideration of the way in which the mother has structured her contributions to the dialogue, to actively engage the child’s contribution, provides evidence that the dialogic space opened up is more of a creative area for joint-construction of meaning-making than previous studies into mother and child interactions have explored. In considering the creative way mother and child negotiate meaning the notion of the Intermental Creativity Zone (ICZ) (Littleton and Mercer, 2013) may be more useful than the ZPD and the metaphor of scaffolding. The ICZ, like the Intermental Development Zone (IDZ) (Mercer, 2000) explains the dynamic and

continuous way in which dialogue is shared by interlocutors to create meaning together. The notion of ICZ also captures the essence of the creative ways in which partners construct meaning together without any necessary intention to teach. As Extract 6.2 illustrates, the mother actively encourages her child's contributions in the activity through dialogue rather than simply providing 'expert' instruction to a 'novice' learner.

In summary, in this section I have foregrounded how the mother provides a pre-school child with an opportunity to voice her opinion. This challenges assumptions that mother-child interaction that is successful in supporting a novice learner is supported by maternal instruction. The mother in Extract 6.2 actively seeks the perspectives of her young child so they can creatively co-construct meaning together. Through the use of questions and pause the mother is able to not only seek the child's perspective but question that perspective. In questioning the child about why the child considers putting all the blocks in one pile is a good idea the mother is supporting her child to think about how they should structure the activity.

6.4 Chapter summary

In this chapter, I have used exemplars of transcription to develop dialogic space theory. I have considered the co-occurrence of questions and pause to consider how dialogic space is co-constructed in mother and pre-school child dialogues.

Pauses that are present in the mother's questions can be a means of encouraging the child to engage in the dialogue. If a question is immediately followed by another question or utterance then, without interrupting, there is very little opportunity for the child to offer their own perspective. The distinction between speech and silence

is absolute; there can either be one or the other. Without silences after the mother's questions there would be one long, continuous trail of speech.

In Extract 6.1, the mother uses pause as a strategy to engage her child in the dialogue. If the strategy of pausing does not provide the anticipated response from the child the mother would try another question or utterance. If the silence after her question or utterance was broken by an utterance from the child, the dialogue between the two individuals could progress, and a dialogic space for negotiating meaning may be constructed. From the perspective of opening a space for dialogue, the pause after the question is as important as the question being asked. If there is no opportunity for your addressee to give an answer to your question then their opinion cannot be heard in the dialogue. Furthermore, if the child's voice is not brought into the dialogue a dialogic gap between mother and child perspectives cannot be achieved; there is no chance of their constitutive difference being held together in tension, thus no opportunity to negotiate meaning together (Wegerif, 2011b).

In Extract 6.2, the persuasive voice of the mother seeks the perspective of her child. The presence of pause in her utterance provides the opportunity for the other interlocutor to join the dialogue. This, in turn, provides the opportunity for perspectives to be held in tension and meaning to be jointly constructed (Wegerif, 2011b). The pause in speech can be as powerful as the words spoken. The pause provides a possible opening of a dialogue where views can be aired, difference debated and perspectives altered; a dialogic space.

Through the analysis of use of pause after questions within dialogue I argue that opportunities to construct dialogic spaces can be opened up. As the dialogue is made up of more than the single contributions of one speaker; rather it is reliant on the contributions of each interlocutor, the opportunity to open dialogic space is not always taken up in dialogues.

In the next chapter, I shall present my analytical findings regarding the utility of contextual resources in widening and deepening dialogic space.

Chapter 7: Dialogic space between mother and child: the child's utility of resources

7.1 Introduction

As discussed in Chapter 2, previous research into dialogic space has focused on the mediatory role of purpose-built technologies in the classroom. It has not considered the use of resources within dialogic space during parent-child interactions in the early years. In this chapter, I discuss how my data analysis exemplifies how the participants in my research resource their co-construction of dialogic space. I address my overarching research question:

Can dialogic space be opened, widened and deepened during parent-child dialogues that focus on discussing the concepts of colour and size?

and first sub-question:

Can current theorising on dialogic space be utilised to understand joint meaning-making processes involved during dialogues between parent and child that focus on discussing the concepts of colour and size?

Following the focus in Chapter 6 on opening of dialogic space, in this chapter I shall foreground the widening and deepening of dialogic space. Moreover, I shall consider the child's active role in introducing contextual resources into dialogue to deepen the dialogic space when discussing colour and size. Consistent with chapter 6, this chapter presents two exemplars of transcription; other exemplars are

supplied in Appendix K. The quantitative data of counted occurrences of sub-theme 'Resources introduced into dialogue by child' is presented in Appendix M.

When considering how resources are used in dialogues between mother and pre-school child to widened and deepen a dialogic space, it is important to acknowledge two principles: the foregrounding and the backgrounding of aspects of dialogue by, firstly, by the researcher (Littleton *et al.*, 2010), as discussed in Chapter 3; and secondly, by those involved in the dialogue (Goodwin and Duranti, 1992). Goodwin and Duranti 'use the term focal event to identify a phenomenon being contextualized'; they argue that an event is contextualized by the participants *involved* in the dialogue, as 'participants treat each other's stream of activity (talk, movement etc.) in a selective way' (1992, p.3). Therefore, it is not the actual, physical, resource that is of interest during this analysis. Rather it is the way that the resource is used in dialogue between mother and child, to facilitate the child's understanding, which is of concern. Therefore, the physical resource is considered as part of the context of the interaction (Linell, 1998). A resource is not brought into dialogue merely by that resource being present in the physical environment or because it is mentioned by the speaker. For the resource to have meaning within the dialogue it needs to be acknowledged by the listener (Goodwin and Duranti, 1992, p.3). As dialogue is constructed by the exchange of roles of speaker and listener, the listener whom has foregrounded the resource in the utterance of the previous speaker, will, in turn, become the speaker. Thus, the contextualization of a resource is made in dialogue *between* the speaker and listener, rather than by either one of them. Therefore, in the extracts of analysis presented in this chapter, a resource is only considered if it is mentioned by a speaker and subsequently

foregrounded by the listener, consistent with the overarching analytic approach.

Dialogues are constructed within a '*complex matrix of contexts*', assembled from an array of contextual resources' (Linell, 1998, p. 132, emphasis in original); however, within my analytical approach I foreground concrete and abstract resources introduced into the dialogue by the child to consider how they are utilised to widen and deepen dialogic space.

7.2 The child's role as co-constructor in dialogic space

Extract 7.1 is taken from an observation of mother and child engaged in a colour-focused activity. I shall use this extract to further argue that the concept of dialogic space can be expanded to explore meaning-making in mother and pre-school child dialogues. Furthermore, I argue that pre-school children are capable of constructing opportunities to deepen dialogic space by suggesting relevant contextual resources to structure debate about colour. The extract begins from a point where the mother and child are debating the difference in red and blue blocks.

Extract 7.1: Transcription Extract from observation MC7 (1) Line Numbers 50-76

- 50 M: So put a blue one on this pile ((points to blue block to indicate pile))
- 51 C: (3) ((selects red block))
- 52 M: Why have you picked that one?
- 53 C: Their tis same ((incorrect response))

54 M: Why do you think they are the same? (3) I think they are different (2) because (.)
 55 that's blue((points)) and that's red ((points), so that goes in a different pile to that
 56 cause different, it's a different colour blue ((points to pile)) and red ((takes block
 57 from child))

58 C: [But...]

59 M: [Look] let me get this one ((blue block)) and you find me another one the same
 60 colour, blue

61 C: Blue ((picking blue block from table))

62 M: That's [it]

63 C: [Like] your scarf ((looking up at mother))

64 M: Err, well my scarf isn't, or though ((looks down at scarf, picks up end of scarf))
 65 it's got lots of colours in it, I suppose, multi-coloured [you might say]

66 C: [Blue] ((points directly at scarf))

67 M: Come round here and show me, ((opens arms))

68 C: ((leaves chair and rests torso on table)) blue ((no pointing))

69 M: Do you mean this one, the flower, here ((points)) well, err yes, it's not really
 70 blue, it's more of a, a erm, purpley colour I suppose (.) Let's see, see if we can find
 71 any blue, ((looking at scarf)) here, here that's the sort of blue, although it's different
 72 the blue here((picks up block)) there are lots of blues, different ones shades, oh ()
 73 does get confusing

74 C: ((reassumes sitting position)) I like your scarf mommy (5)

75 M: Thank you darling, now let's get on with sorting these blocks, you did really well

76 then, finding me a blue block, shall we look for another one.

As discussed in Chapter 2, one of the most prevalent ways that a mother's and child's perspective of colour could differ is in relation to the mother's 'expert' knowledge and the child's 'novice' experience with the concept of colour; their constitutive difference. Lines 50-58 of Extract 7.1 illustrate this point, providing evidence of the existence of dialogic space in mother and pre-school child dialogues in line with previous theorising on dialogic space. The mother indicates that she wants the child to select and place a blue block in the pile (line 50). The child, however, selects a red block. When questioned by the mother to why she had selected a red block the child responds that she has selected it because it is the same (line 53). Thus, there is a tension between the two individuals relating to a correct selection of the colour blue. The tension continues. The mother tries to understand why the child thinks the red block is the same as the blue block and gives the child her opinion on why she thinks the blocks are different (line 54-56). The child still appears to disagree (line 57). The mother then tries a different approach to her argument by asking the child to find a blue block in a different way; by matching the one she has selected (line 58). The constitutive difference in their identity enables them to be immersed in the dialogue; the individuals are not scared to voice their difference of opinions, but are also prepared to listen to the perspective of the other (Mercer, 1995).

7.2.1 The child as an active contributor

The certainty of the mother's expert knowledge on the colour blue is put under question when the child introduces into the dialogue an immediate contextual resource; the scarf the mother is wearing. The contextual resource of the scarf is

first brought into the dialogue by the child. This provides evidence that the child is capable of introducing contextual resources into the dialogue, questioning the passive role of the child and active role of the adult that has been foregrounded in traditional studies of parent-child interaction (Kuczynski, Lollis and Koguchi, 2003). The mother and child can utilise different genres of dialogue in their interaction. As discussed in Chapter 6, the type of dialogue most characteristic of exploring mother and child interaction through the metaphor of scaffolding is Magistral dialogue (Cheyne and Tarulli, 1999). In Magistral dialogue there is a power asymmetry between the '*first* (Magistral) voice over the *second* (novitiate) voice' (Cheyne and Tarulli, 1999, p.18). Consistent with Bakhtin's (1986) theories of the superaddressee a third voice of authority is brought into the dialogue via the first voice. The voice of authority provides the mother (as teacher) with power over the child (as learner). However, analyses of interactions, such as the exemplar in Extract 7.1, further provides evidence that Magistral dialogue may not be the only genre of dialogue observed in mother and pre-school child talk. There is also evidence of Socratic dialogue between the interlocutors; 'the questioning other' (Cheyne and Tarulli, 1999, p.19).

The child's reference to the mother's scarf, "like your scarf" (line 62) introduces a contextual resource into the dialogue that can be utilised to debate colour. In the dialogue that follows, the way the dyad discuss the scarf provides an opportunity for the mother and child to talk about colour. The dialogue that occurs is not without disagreement (Cheyne and Tarulli, 1999). The mother's response to the child's initial comment relating to her scarf and the colour blue indicates that she does not necessarily agree with the child (lines 63-64). This, however, does not stop

the flow of talk and the dialogue proceeds. When children are immersed in dialogic talk they are 'called to explain themselves in dialogues with specific others' (Wegerif, 2011b, p.183). The mother questions the child regarding her seeing the colour blue in her scarf (line 66). The child reattempts to draw the mother's attention to the 'blue' in her scarf. The mother still fails to see the 'blue' but moves the dialogue along by speculating on possible solutions (lines 68-71). The debate that is co-constructed in the dialogue, through the introduction of the scarf, could be referred to as a 'tension' as the individuals are not seeing the blue in the scarf from the same perspective (Wegerif, 2010b, p.23).

The dialogue between the mother and child does not become a stand-off between their opposing views, as we may expect in Disputational Talk; instead the mother tries to offer possible resolutions to their debate (Mercer, 1995). Nevertheless, the talk between mother and child is not cumulative. The dyad does not appear concerned with preserving the status quo of the group identity; neither mother nor child is afraid of voicing their different opinions. The mother is happy to question the child on where she sees the colour blue and the child is happy to maintain that she can see the colour blue. It is the 'active disagreement' in dialogue that 'stimulates and deepens understanding' (Bakhtin, 1986, p.142), as the second voice (of the child) is 'active', 'empowered' and poses some 'interesting complications' (Cheyne and Tarulli, 1999, p.19). Thus, the child's introduction of the scarf into the dialogue presents the mother and child with a means of deepening their understanding about the colour blue through their exploratory talk (Mercer, 1995).

In lines 69-71 the mother's speech suggests that she sees the colour blue in her scarf. However it is a different shade of blue to that of the blocks on the table. It is possible to assume that if the dialogue were between an adult and an older child or two adults the dialogue may have progressed along the lines of debating shades of blue. In debating the different shades of colour the mother and child could have widened dialogic space about 'blue'. Widening of dialogic space occurs when two interlocutors increase 'the degree of difference between perspectives in a dialogue while maintaining the dialogic relationship' (Wegerif, 2010a, p.314). However, in Extract 7.1 this does not happen. The child does not comment on the mother's utterance about 'different blues' and the mother does not pursue this line of debate. As discussed by Rogoff, adults will be selective in the amount of information they provide to their young interlocutor, being 'sensitive to the perspective and knowledge of the listener' (1990, p.73). The mother may have considered introducing the notion of 'shades' of colour beyond her child's grasp at this time. In line 75 the mother directs her utterance towards focusing on the wooden blocks which are part of the activity in which they are engaged and the scarf is not mentioned again by either interlocutor.

7.2.2 Deepening of dialogic space dependent on co-construction of dialogue

The discussion about the scarf can be viewed in two ways; as a distraction from the task they are involved in or a unique spontaneous moment that has supported the space for the dialogue about colour to be maintained. The child could have used the scarf as a distraction. Observers standing outside of the dialogue will never know the reason behind the child spontaneously talking about her mother's scarf. When

the child said “like your scarf” (line 62) to her mother she may not have been saying ‘like the blue colour in your scarf’ she *may* have been saying “I like your scarf mommy” as she did in line 72. However, it is the mother that interprets the child’s utterance as meaning the blue colour in her scarf. As Maybin (1994) discusses it is the listener rather than the speaker who chooses which interpretation of the previous utterance they will pursue. As Linell discusses ‘contexts are *not objective environments* [but]... aspects of the physical, social and cognitive environments which are *assumed, perceived, believed or known to be relevant by actors* (1998, p.137, emphasis in original). In the case of the scarf, as an analyst, one would perceive that the mother has seen the relevance of the scarf to the topic under discussion, colour, and more specifically the colour blue. The role of speaker and listener alternate with each exchange of utterance spoken, and so listener becomes speaker.

The mother has inferred from the child’s speech that the child is referring to the colour blue in her scarf. It is from the mother’s interpretation of what the child meant when the child commented “like your scarf” that the dialogue relating to the possible colour blue in the mother’s multi-coloured scarf continues. It is the child’s initial comments “like your scarf” (line 62), intentionally made or not, *alongside* the mother’s interpretation of the child’s meaning that deepens debate about the colour blue. Furthermore, it is the dialogue between the two individuals about the contextual resource that keeps the dialogic space open for further debate. At any time, either the mother or child could change the direction of the dialogue away from the reference to the scarf, indicating the temporary and provisional nature of the contextual resource in the dialogic space (Linell, 1998; Maybin, 1994). The

unique instance of using the scarf as a contextual resource is kept alive through the joint interaction between the pair and not by one or other individual. The child has listened to her mother's response to her initial utterance about the scarf and chooses to proceed with dialogue relating the colour blue to the contextual resource.

7.2.3 Debating with the third voice

The debate about the colour blue in the scarf can also be analysed in another way to highlight the socio-cultural nature of even the most basic concepts such as colour. This questions the assumptions of the dialectic nature of dialogue asserted in the metaphor of scaffolding, indicating a more dialogic approach to investigating parent-child interaction is needed. The mother is unconvinced by the child's statement of "like your scarf" (line 62) in relation to the colour blue in the sense that the mother does not necessarily see the colour blue in her scarf. This, however, opens an uncertain, questionable exchange from the mother, debating the presence of the colour blue (lines 68-71). The mother is still engaging the child in her utterances; she uses the words 'we' illustrating the joint nature of constructing meaning in the dialogue. At the same time she is debating with herself if the colour blue is actually present in the contextual resource or not. This instance can be explained in terms Wegerif's theories on the 'fuzzy...temporary [and] provisional' structure of concepts (2011a, p.86). Wegerif argues that concepts are not fixed terms which remain static; rather they are always under construction in the social, cultural and historical contexts in which they are co-constructed. In this sense, a concept will never be a fixed and secure term in our thoughts but will always be

open to re-negotiation dependent on our experience and through dialogue (Wegerif, 2011a). Lines 68-71 in Extract 7.1 illustrate this point, compounding even the most basic of concepts, colour, to uncertainty.

Bakhtin discusses how a speaker and a listener are not the only voices present in a dialogue; there will always be a third voice present, that of a witness or 'super-addressee' (1986, p.126). A super-addressee is always present to question, debate and understand what is said: 'listening to myself as if I was other to myself' (Wegerif, 2010b, p.181). The mother begins her utterance "do you mean this one, the flower, here ((points)) well, err yes, it's not really blue" (line 68). From the last part of this utterance "it's not really blue" we can perceive that the mother is trying to convince the child that the colour is not blue. This is an attempt to change the child's perception. In the utterance, there is also uncertainty on the mother's part about the shades of blue. The mother is not only debating with the child but also with the super-addressee, seeing her own perspective through an outsider's eyes (Wegerif, 2011b).

In summary, the concept of dialogic space can be utilised in exploring the dialogues of mother and pre-school child engaged in colour focused activity. Considering the dialogue between mother and child through the lens of dialogic theory enables the exploration of how understanding of the concept of colour can be deepened by the tension in dialogue when two interlocutors do not agree on a subject and the presence of a third voice, the super-addressee, in debating uncertain social constructs. This is significant in two ways. Firstly, consideration of how pre-school children are active in deepening their understanding of concepts currently beyond

their capabilities brings into question theories that favour maternal instruction in the child's acquisition of concepts beyond their grasp. Secondly, the introduction of a local resource into the dialogue by the child provides the dyad with opportunity to deepen their debate of colour. Contextual resources being utilised in the construction of dialogue, as opposed to the dialogue being projected out onto a learning platform, has not been considered in theorizing dialogic space before. Nevertheless, the use of a contextual resource, debated in dialogue, enables the interlocutors to talk about colour in a new way, supporting them to debate their different perspectives on the colour blue.

Contextual resources, introduced into the dialogue by the child, are used to deepen the dialogic space so the concept under debate can be reflection upon in relation to other objects that are familiar to the dyad. However, *opportunity* to widen dialogic space, by increasing the difference in perspective, is not taken up by the child or the mother. This indicating the mother is sensitive to the child's current capabilities in relation to colour and does not pursue lines of inquiry that are currently beyond the child's understanding.

So far, my analysis has foregrounded the dyads use of immediate contextual resources. In the next section, I further my argument about the use of contextual resources to deepen dialogic space in dialogues with pre-school children by considering the use of abstract contextual resources.

7.3 Deepening of dialogic space through the child's utility of abstract resources

In this section, I present analysed data to further my argument that contextual resources utilised by mother and child provide a means of deepening dialogic space. The contextual resource foregrounded here is the use of abstract resources that are 'not directly and publicly manifest in the perceptually available situation' (Linell, 1998, p.129). Firstly, I present Extract 7.2, in which the dyad have been jointly constructing two separate piles of blocks, one containing big blocks and the other containing small blocks.

Extract 7.2: Transcription Extract from observation MC8 (2) Line Numbers 115-128

- 115 M; So now then my prince where will we put this one ((picks up big block, flips it in
116 hand))
- 117 C: Cor, I do that
- 118 M: Just once then, then tell me which pile the big block goes in ((leans forward
119 putting big block in child's reach))
- 120 C: ((takes block, tries but unable to flip as mother has done))
- 121 M: So then, where does it go (buss-ta)?
- 122 C: You said big one, like Daddy's car, Daddy got big car
- 123 M: Yes darling Daddy's car is big it's so he could fit you all in
- 124 C: Is your car big Mommy, like Daddy?

125 M: Erm, well my car is smaller than Daddy's, so I've got a little car

126 C: But Daddy big car

127 M: Yes, Daddy car big, like your big block, which pile will your big Daddy car block

128 drive to?

In Extract 7.2, the mother's use of the word 'we' as opposed to 'you' or 'I' indicates that she views the activity as a joint construction rather than an independent venture. Thus, she intends for the pair of them to complete this small part of the task together (De Guerrero and Villamil, 2000); the mother is identifying with the dialogue more than her identity of 'I' (Wegerif, 2011b). The mother is opening up the possibility for the dyad to engage in a dialogic space, facilitating the child's active participation in the activity. The relationship between mother and child needs addressing when considering why the mother acts in the described way. As discussed in Chapter 2 and elaborated in Chapter 6 and in Section 7.2, there is an asymmetrical power relationship between parent and child but in the dynamics of parent-child relationships power can be temporarily shifted between the two individuals (Kuczynski *et al.*, 2003) through dialogue (Cheyne and Tarulli, 1999). The mother's and child's dialogue in Extract 7.2 suggests the dyad is approaching the problem from the position of two more equal actors than previously considered in inquiry into mother-child interaction. The dialogue in Extract 7.2 can be interpreted in a way that the mother is willing to enter into dialogic space with her child in relation to the concept of size. This is illustrated in the mother's willingness to pursue the contextual resource of 'Daddy's car' (lines 121-122) brought into the dialogue by the child (Arvaja, 2008). As discussed in Section 7.1 in order for a contextual resource to be utilised in the dialogic space, the suggested resource must be foregrounded by the listener. In Extract 7.2 the child suggests 'Daddy's car' and the mother utilises this contextual resource in her next utterance.

Wegerif discusses how individuals bring into their dialogues 'people who are not present, distant places and past and future events' (2011b, p.180). The child's initial

reference to Daddy's car (line 121) is such an instance. When the mother continues the interaction discussing the car, the dialogic space is deepened. In follow-up interviews, I questioned the mother about the relevance of the 'Daddy's car' and 'big'. The mother commented that:

“all the children normally ask ‘who’s car are we going in?’, even the bigger ones, when we go out altogether as a family, normally it’s my husband’s car we use, when we are altogether coz he has the bigger car, hence Daddy’s big car”

(Interview MC8)

Although the car is not physically present in the room at the time of the observation, the mother and child both understand what is meant by 'Daddy's big car', indicating intersubjectivity between mother and child through a past, shared history (Rogoff, 1990). If the child had referred to a resource that the mother was not familiar with, the dialogue would not have proceeded along the same lines and this specific opportunity for talking about 'big' objects would have collapsed.

The child's reference to 'Daddy's big car' (line 121) and the mother's confirmation of her awareness of what is being spoken about (line 122) brings the contextual resource of the car into the present dialogue about big and small, as a 'common reference point' (Rogoff, 1990, p.72). In this way, the child is active in bridging the gap between the known and the unknown (Rogoff, 1990) in their own understanding of a concept. Rogoff (1990) asserts that caregivers build bridges between what the child already knows and what they currently do not understand through guided participation. However, in Extract 7.2, it is the child who makes the

connection between a shared contextual resource and the current task. The child's active role in building a bridge between something he understands (Daddy's car) and the wooden blocks supplied for the activity asserts that it is not just caregivers who are active in making connections between the known and the unknown. The child is not yet capable of independently sorting the blocks into two different piles based on size. Nevertheless, he is able to make connections in relation to the word 'big' and brings this into the dialogue. Through the child's introduction of the car into the dialogue and the mother's willingness to pursue this line of thought the dyad are able to mutually construct meaning about the concept of big in a deeper way than they would be able to if they just engaged with the wooden blocks. The child is using an abstract resource that is familiar to himself and his mother to deepen his understanding of the concept of size.

The child then probes further; "is your car big Mommy, like Daddy?" (line 123). The mother's response (line 124) continues to deepen the dialogic space and also brings in the second concept of small. The uncertainty at the beginning of the mother's utterance "erm" suggests she is debating whether her car is big or small. The terms big and small are relative and as discussed earlier, in relation to Extract 7.1, concepts are not static, fixed 'things', but are blurred and indistinct 'perceptives on reality' (Wegerif, 2011a, p.86). The mother's car may be small in comparison to the child's father's car, but is potentially big in comparison to other vehicles, hence, the mother's undecided start to her utterance. This could be an instance where the mother is debating with the questioning super-addressee of the dialogue as well as with her child (Bakhtin, 1986).

If the child had taken up the mother's reference to the concept of small then the dialogic space could potentially have been widened, however, the debate about small is not taken up by the child, whose response is again concerning Daddy's big car (line 126). The mother does not pursue her connection to the concept of small, instead following the last utterance of the child in relation to big. The dialogue continues by the mother making a connection between the child's contextual resource of a big car and the wooden blocks of the activity (line 127-128). She incorporates it into her next utterance, directing the child to place the block in the correct pile.

In summary, I have furthered my argument that contextual resources, incorporated in dialogue through joint attention, support the deepening of dialogic space in mother and pre-school dialogues about concept-focused activity. In this section, I foregrounded the child's active role in deepening dialogic space in relation to the concept of big. The child's role in suggesting an abstract resource provides evidence salient to the pre-school child being an active co-constructor in their understanding. Rather than the child being a passive recipient of the mother's instruction (Wood and Middleton, 1975), the child actively makes suggestions appropriate to his/her own understanding. The dialogic space about the concept of big is not widened between mother and child despite there being potential for this to occur. Rather than widening the dialogic space to include the relationship between 'big' and 'small', the child's contributions determine that the dialogue remains focused on the concept of 'big'.

7.4 Chapter summary

In this chapter, I have presented exemplars of my analysed data to serve a dual purpose. Firstly, I have considered if current theorising on dialogic space can be utilised to understand joint meaning-making processes involved in dialogues between parent and child when discussing the concepts of colour and size, thus addressing my first sub-question. In doing so, I have considered:

- 1) The role of the tension between the mother's and child's perspectives in relation to concepts (Section 7.2)
- 2) how the mother employs the role of the superaddressee in dialogic space when debating ambiguous, fuzzy concepts (Section 7.2)
- 3) The speaker's identity in relation to the dialogic space (Section 7.3)
- 4) How the asymmetrical power differential between mother and child is negotiated in constructing dialogue to permit the co-construction of meaning (Section 7.3).

Secondly, I have used the findings from my analysis to foreground the use of contextual resources in mother and pre-school child dialogic space. This specifically addresses my overarching research question of: Can dialogic space be opened, widened and deepened during parent-child dialogues that focus on discussing the concepts of colour and size? In foregrounding contextual resources I have considered the child's active role in deepening dialogic space through the use of concrete and abstract resources (Sections 7.2 and 7.3). Through the mother and child's mutual construction of dialogue, contextual resources that the child introduces into talk can be used to deepen the dialogic space about the concepts

under scrutiny. The pre-school child is able to make connections between concepts in which she/he is not yet secure and local or abstract resources, actively deepening debate about unfamiliar concepts and bridging the gap between the known and unknown. Furthermore, I have argued that the potential to widen dialogic space is not present in dialogues between mother and pre-school child. Rather than expanding the debate on the concepts under discussion, opportunities to widen dialogic space are not taken up by the child or pursued by the mother.

The chapter concluded with the salient argument that in exploring mother and pre-school dialogues through the lens of dialogic space it can be argued that through dialogue pre-school children actively co-construct meaning with their interlocutors. In the next chapter, I shall draw together the main points of this thesis in considering how my research impacts upon my practice in early years education.

Chapter 8: Discussion and Conclusions

8.1 Introduction

In this chapter I explore the theoretical and practical implications of my research. In doing so, I begin by contextualising the key theoretical and methodological commitments that have shaped my research. The theoretical and practical contributions of my central findings are then discussed followed by a consideration of the implications for future research.

8.2 Key theoretical and methodological commitments

My research is situated within socio-cultural theory and as such a number of assumptions were inherent in my approach to data collection and analysis. For instance, an important assumption of this research is the central role of language as a psychological tool that mediates mental functions and equally as one of these mental functions (Vygotsky, 1986). Also, I adopted the emphasis placed on how learning occurs firstly on the social intermental plane *between* individuals before being internalised into the individual, intramental plane (Vygotsky, 1986) because I wanted to investigate how meaning is created between individuals. I identified the need to distance my research away from traditional assumptions that interaction between mother and child is dialectic in nature; instead I foregrounded the dialogic processes present during mother-child interactions. The notion that dialogue is constructed through debate and multiple perspectives (Bakhtin, 1986) without synthesis into one single monologue (Wegerif, 2005) guided my exploration of how dialogue between mother and pre-school child could support the co-construction of

meaning. Thus, in my research I maintained the central importance of language in mediating learning on the social plane but viewed dialogues as a space for the co-construction of meaning through debate, negotiation and re-negotiation. Through consideration of these theoretical foci I constructed an overarching research question:

Can dialogic space be opened, widened and deepened during parent-child dialogues that focus on discussing the concepts of colour and size?

Two sub-questions were also constructed to explore issues in more detail:

- i. Can current theorising on dialogic space be utilised to understand joint meaning-making processes involved during dialogues between parent and child that focus on discussing the concepts of colour and size?
- ii. Can early years practice be enhanced by a better understanding of the child's role in the co-construction of knowledge during dyadic interactions that focus on the concepts of colour and size?

The methodology of this thesis rests within my ontological beliefs and epistemological convictions. Clearly, my ontological and epistemological positioning has had an impact on the work presented within this thesis. Specifically, I consider my ontological position at the constructionist end of the continuum creates a bias on how the nature of reality is considered. Rather than approaching this thesis from the perspective that fixed realities exist across society, a view that multiple realities are constructed and re-constructed between individuals through dialogue was adopted. Based on my ontological belief, my epistemological conviction that phenomena requires investigation within socially, culturally and historically

constructed worlds has created bias in the way I designed a study to investigate mother and child interaction during the early years. Following my epistemological convictions, this thesis considers knowledge as a social product that is incapable of being understood separate from its social actors. Thus, the methods of data collection and analysis in this study reflected these beliefs.

My aim to collect naturally-occurring dialogues between mother and pre-school child drove my approach to data collection. A case study approach enabled me, as much as possible, to observe interactions as they naturally occurred. I collected data in the form of unstructured observations of mother-child dyads who were engaged in concept-focused activity. This research observed 16 mother-child dyads in the context of a 'stay and play' pre-school education setting. In addition, I conducted semi-structured interviews incorporating a VSRD technique with 13 mothers after they had been observed. The motivation for conducting the interviews was based upon a constructionist ontology whereby multiple realities are constructed in time and place in which they are situated was adopted and an interpretivist epistemology whereby a situation can be interpreted in multiple ways. The two methods of data collection were not used to reach a consensus, as this would have been inconsistent with my dialogic approach to the research, but to seek participant's interpretations of life as told (Bruner, 1984) alongside my own analytic interpretations of the recorded events. As the interpretation of each mother participant was specific to her it was not appropriate to analyse the observational data that did not have accompanying interview data. The data set used in this case study was transcriptions from 13 colour and size focused observations and 13 semi-structured, VSRD, interviews.

I utilised thematic analysis to identify themes reoccurring through the data set, and sociocultural discourse analysis to enable an exploration of the moment-by-moment exchanges in the dialogues of mother-child interactions. This approach to analysis aided me in achieving an inductive, exploration of data to address my research questions. Furthermore, thematic analysis provided a means of opening my eyes to the richness of information in everyday situations and constructing a new way of seeing a social phenomenon that had not previously been investigated (Boyatzis, 1998). An original contribution of my research is the inductive nature of my analysis. Rather than coding data according to pre-determined categories as done previously by many researchers when analysing interactions in the early years, I analysed the moment-by-moment interactions of the mother-child dialogues and themes that I constructed from the data. A key strength of this analytical approach is the scope for interpretation of occurrences in the data that had previously not been considered.

I have also considered the limitations of my data collection and analysis:

- In terms of data collection, as parent and child observations need to be recorded for future analysis there is a risk that participants will act differently for the camera than they might if they were not being observed.
- As analysis relies, partly, on the interpretations of others there is potential for participants to provide answers they think the researcher is seeking rather than their own interpretation of the situation.
- The in-depth, manual approach to data analysis is very time-consuming and thus, most suited to smaller corpus of data.

Nevertheless, there are several benefits to my analytical approach:

- Use of SCDA makes it possible to explore moment-by-moment interactions of parent and pre-school child in the context of the wider dialogue thus enabling me to foreground specific areas of the interaction whilst maintaining context
- As the interpretations of participants are sought in VSRD interviews, I was able to gain new insights into previously unconsidered phenomena (e.g. the reasons *why* the mother paused after asking questions), thus creating a multi-voiced interpretation of events
- As my data analysis was inductive, an open-minded approach to ways in which dialogic space is opened, widened and deepened was adopted

In the following section, I present the research findings that have arisen from my data analysis.

8.3 Key contributions of this research

In the following sub-section, I discuss how my research has made a contribution to the theory and practice of education. Firstly I present my findings in relation to my overarching research question and my first sub-question. In Section 8.3.2 I address my second sub-question and discuss the implications of my findings in terms of how they might enhance early years education. I begin with my contribution to educational theory.

8.3.1 Contribution to educational theory

My main theoretical contribution is a significant extension to Wegerif's (2011b; 2010b) theorising about dialogic space by illustrating that dialogic space can be created during asymmetrical dyadic interactions in the early years. Previously, empirical research considered mother and pre-school child interactions in line with Vygotsky's (1986) Zone of Proximal Development and the metaphor of scaffolding. However, I have illustrated how young children (aged 30-36 months) can contribute to the co-construction of dialogic space in asymmetrical interactions. Rather than the young child's learning being guided by maternal instruction, I argue that meaning is co-constructed between mother and child in dialogue, supporting a view that meaning-making is a continuous, dialogic process (Littleton and Mercer, 2013). In my analysis of dialogues I considered how the mother and child identified with the space of dialogue (Wegerif, 2011b). They immersed themselves within the dialogue and were willing to listen to each other's perspective in a non-competing way and they accepted the suggestions of each other in finding an appropriate way to complete the problem solving task together. In identifying with the space of dialogue the interlocutors revert away from using language to position their identity outside of the dialogue, 'I', to using terms that suggest they are involved in joint construction of meaning, 'we' and 'us' (Wegerif, 2008). This is important because it exemplifies how young children can be immersed in dialogue offering their own perspectives as well as taking on the perspectives of others. It appears that this had not been considered in previous investigations of young children engaged in concept-focused activity. Through extension of the theory of dialogic space it can be argued that young children are capable of co-construction of meaning.

To be immersed within the dialogue does not mean that the interlocutors will accept the perspective of the other individual without question; the mother and child are open to each other's suggestions, but they do not hold the same perspective and so a tension builds in the dialogue where the difference in opinions can be debated (Wegerif, 2010b). The talk is not disputational or cumulative but exploratory (Mercer, 2000). This is important because it exemplifies how young children can play an active role in the co-construction of the dialogue in interaction with an adult. Through the lens of dialogic space it can be argued that investigations that focus on maternal instruction do not adequately address the dialogic way that mother and child construct meaning. However, the metaphor of scaffolding has provided theoretical benefits that have relevance to this research study. Firstly, the concept of contingency has been considered in relation to how a mother constructs her utterance in dialogue with her child (Wood *et al.*, 1976). Secondly, the co-active connections between individual, other, object, context and mediational means are explicit in the dialogues observed between mother and child, indicating that support in aiding a child's understanding of the concepts of colour and size is not formed from one element of the social world but is situated in a tangled web of interconnected factors (Mascolo, 2005). In the remainder of this section I discuss how the analysis presented in Chapters 6 and 7 make further contributions to educational theory.

Opening dialogic space during asymmetrical dyadic interactions in the early years:
the role of questioning and pause

The use of questioning in dialogues to gain the other person's perspective and to explore meaning together has been documented previously (Littleton and Mercer, 2013; Early Education, 2012; Wegerif, 2010b; Mercer and Littleton, 2007). However, in this thesis, I argue that the pause that is constructed in relation to the question is as important as the question itself in opening up dialogic space. The use of pause after a question in a mother's utterance was foregrounded in Chapter 6. The mother's questions followed by the mother's contingent use of pause provide opportunity for a dialogic space to be created in the dialogue with the child. Contingency is a term associated with the metaphor of scaffolding. However, I argue that the term can be mobilised to consider how the mother creates opportunities for dialogic space to be opened in interactions with her young child. A consideration of how questions *and* pause are used together in opening dialogic space has, up until now, not been considered in early years settings.

How contextual resources can be used by young children to deepen dialogic space during asymmetrical dyadic interactions

Existing research foregrounds the use of technology as a platform for dialogic space, however, I argue that resources are drawn into dialogues by interlocutors. A variety of different contextual resources are utilised through dialogue: concrete objects present in the situated event and abstract phenomenon that are unseen to the observer. In this thesis I foreground contextual resources introduced into the dialogue *by the child*.

Despite a contextual resource being introduced into the dialogue by the child the mother and child are jointly responsible for utilising resources in dialogue; the

resource only becomes relevant to the dialogue if it is suggested use by the speaker is taken up by the listener (Goodwin and Duranti, 1992). In making the discursive role of contextual resources in deepening dialogic space salient, I argue that traditional assumptions of the relationship between mother and child need to be questioned (Kuczynski, Lollis and Koguchi, 2003). The child is an active contributor to the meaning-making process. The temporary shifting of the power differential between mother and child allows contextual resources to be debated in relation to concepts under scrutiny. Furthermore, the existing relationship held between mother and child becomes paramount in debating contextual resources from previous events; an area of the mother-child interaction that is absent from the metaphor of scaffolding (Stone, 1998).

The absence of incidence of widening dialogic space in asymmetrical dyadic interactions

In my analysis I also considered how dialogic space could be widened in mother-child dialogues. My findings, presented in Chapter 7, indicate that my participants did not take up opportunities to widen dialogic space. Below I consider the possible reasons why widening of dialogic space was not apparent in this study. The mother's sensitive approach to how much information she provides in her utterance based upon the child's previous utterance *and* the mother's understanding of her child's current capabilities are possible reasons for dialogic space not being widened in dialogues with young children. In this way the mother is acting contingently to the child's capabilities. As discussed in Section 7.3, the potential for opportunity to widen dialogic space is sometimes present but is not

taken up by the child. In these instances the mother is acting contingently to her child's current capabilities. The mother does not pursue opportunity to widen dialogic space possibly because she considers it currently outside of her child's understanding.

Furthermore, widening of dialogic space in the mother and child dialogues may be absent for other reasons. Specifically, the nature of the activity and the participation in this research study are considered. As discussed in Section 4.5, time was dedicated to selecting an appropriate task for the mother and child participants to engage in. Based on evaluation of previous studies investigating pre-school concept development and mother and child interaction a wooden block task was chosen to focus the mother and child's attention on the concepts under consideration. The dyadic interactions observed in this thesis were constructed for the purpose of this study and, as such, were not naturalistic. As debated in Section 4.4, it is questionable whether any observations set-up within studies to observe behaviour can be classified as naturalistic (Robson, 1993). As discussed in Section 2.5.2, the child's learning is not necessarily supported by the actions of another individual alone; rather support is constructed through the interconnected elements of self, others, context, objects and mediational means (Mascolo, 2005). Thus, consideration has to be made of the impact of the choice of task and the participation in this research study had on the dialogues that were observed between mother and child. The mother participants knew the remit of the activity and so were aware that the activity had an expected 'end-point' (the sorting of blocks into colour or size categories). This understanding could have had an impact on how the mother constructed her part of the dialogue with her child. In turn,

many of the mother participants explained to their children what they were expected to do (sort the blocks). Thus, the child was also aware of the expectation to complete the activity in a specific way. The closed nature of the activity could have created limitations for the widening of dialogic space in the dialogues.

The participants' awareness that they were expected to sort the blocks into pre-determined categories will have shaped the way they jointly constructed the dialogue together. Their understanding that there was an expected conclusion to the activity may have constricted their creativity in the way they talked about the blocks. This leads to the consideration of whether the presence of the super-addressee, a third voice, within the activity constrained the dyad's dialogue along socially expected lines of enquiry rather than allowing for opportunities to widen dialogic space. The presence of a super-addressee was debated in Chapter 7. In Section 7.2.1, the role of the third voice present in the first voice of the mother was debated. The third voice provides the mother with an asymmetrical power relationship with her child. It is through the presence of a third voice that one needs to explore the lack of widening of dialogic space. In the extracts analysed in Chapters 6 and 7 there are exchanges between the two interlocutors that open and deepen dialogic space about the concepts of colour or size; however, it is the presence of the third voice, heard through the first voice of the mother, that prevents the widening of dialogic space. The mother may have in mind that the task has an expected end-point and is maybe conscious of achieving this end-point with her child. Therefore, the voice of authority, spoken through the mother, keeps the activity on track, not allowing the dialogue to drift too far from the original remit and the socially expected completion. This is evident in the utterance of the mother

participant in each of the extracts analysed in Chapters 6 and 7. Through her utterance the mother keeps the dialogue relevant to the task of sorting blocks by colour or size. Although these utterances secure a successful completion of the activity they do constrict the widening of dialogic space around the concepts of colour and size.

Thus, it can be argued that the choice of activity and the participation in the research study could have impacted in the lack of evidence of widening of dialogic space alongside the mother's contingent construction of her dialogue within her understanding of her child's capabilities. However, despite the widening of dialogic space not being found in this data set, future research could consider ways in which widening of dialogic space with pre-school children could be supported. Alongside these theoretical contributions, this thesis offers contributions to early years education practice.

8.3.2 Contribution to the practice of education

My second sub-question focused on how the research presented in this thesis can enhance early years education. There are several implications for practice that can be drawn from my research. In considering the practical implications of my research I revisit my rationale for conducting this study: the EYFS's emphasis on 'parents as partners' (DCFS, 2007, p.4), the lack of dialogic teaching in early years education and how creativity can be harnessed through dialogues with young children.

Firstly, I consider how my research has better informed me in promoting the EYFS curriculum's principle of 'parent as partners' (DCFS, 2007, p.4). As discussed in Chapter 1, there was a thought-provoking moment in my day-to-day practice that

made me consider how parents can support their children in learning concepts such as colour and size. My understanding of the process of co-construction of meaning between parent and pre-school child has developed during the course of my doctorate. I am now able to offer parents suggestions, based upon my own study, as how to support their child's understanding of colour and size. These include suggestions for opening dialogue about colour and size through questions and pause and deepening debate through talk about other people/places/objects that have relevance to the concept under discussion.

Moreover, the conclusions drawn from my study have enabled me to facilitate the 'stay and play' sessions in ways that encourage dialogue about colour and size between parents/caregivers and children. These include:

- Providing resources to encourage talk about colour and size (such as variations on wooden blocks used in this study),
- Arranging the room so children and parents/caregivers are encouraged to sit together rather than apart to encourage dialogue between them (previously, adult-sized chairs were arranged in a circle away from the children's activities)
- Verbally encouraging parents/caregivers to engage in dialogue with their children about colour and size of the resources that surround them through open-ended questions, providing time to hear the child's voice and following the child's lead when they make relevant connections between resources and concepts.

Secondly, I consider that my research is of practical benefit in providing insight into how dialogic teaching could be introduced into early years education settings. I consider the pedagogy relevance of this thesis to the EYFS curriculum as significant. For example, the EYFS curriculum states that in providing children with effective learning opportunities practitioners should:

- Give children time to talk and think
- Follow child's lead in conversation and think about things together

(Early Education, 2012, p.7)

The case study approach I have used in this thesis has enabled me to gain practical insight into how each of the above points can be *achieved* in early years education settings. In relation to giving children time to talk and think, this thesis presents evidence of how during dialogue an adult's contingent use of open-ended questions and pause provides opportunity for dialogic space to open permitting interlocutors to become immersed in debate. In following the child's lead in conversation, the evidence I have presented in this thesis shows that the pre-school child is an active contributor in deepening dialogic space through introducing contextual resources into the debate about concepts such as colour and size. In order to disseminate these findings I consider practitioner workshops offering advice on good practice could be beneficial to the wider Early Years Professional Network. These workshops can be supported by visual resources that can promote collective discussions of my extensions of dialogic space to enrich early years practice. In addition, I have produced a visual guide for practitioners highlighting the implications for practice and practitioners arising from this thesis. This guide is supplied as Appendix N.

Additionally, in addressing my third rationale for conducting this research I consider how the findings presented in this thesis can be harnessed to promote creativity in early years education. When creativity is considered as being borne out of multiple perspectives (Wegerif *et al.*, 2010) ways to promote creative learning environments in early years settings through dialogue can be addressed. Early years practitioners can enrich their practice by actively engaging in dialogues that explore the constitutive difference in their own and the child's perspective. Rather than providing the child with instruction on how to complete a task, practitioners should be striving to engage in dialogues with young children which explore meaning jointly.

This research is situated within an interpretive case study approach, and thus is my interpretation of how meaning is co-constructed between parent and child within an early years education establishment. This thesis, the intended publication of papers in International Early Years Educational journals and the dissemination detailed above make my work accessible to other practitioners (Donmoyer, 2009). However, this thesis also presents an opportunity for other practitioners to infer *what could be* in their own practice based on what they read (Schofield, 2009). The research presented here gives other practitioners the opportunity to access the situation of my case study, providing new insight into how key principles of the curriculum are brought into being in the workplace. In line with my ontological and epistemological convictions I suggest that other practitioners should read my work and make their own judgements on how it could enhance their practice. Importantly, however, my work offers an opening for practitioners to consider how adult-child dialogues *could* support meaning making within their own practice

(Donmoyer, 2009). Differences of opinion are welcomed in the wider debate of how dialogic space is opened, widened and deepened (Wegerif, 2010a).

Additionally, my position as a practitioner-research makes this thesis a piece of extended work carried out by an equal professional (Donmoyer, 2009). The thesis makes no claim to be a mandatory or statutory framework; it is an exploration of how dialogic meaning-making is constructed within my setting. For this reason, readers can use my work for their own purposes; some may take from it a new methodology for investigating adult and pre-school child interaction; others may focus on the theoretical benefits of dialogic space while others may find the specific units of analysis, contextual resources and pause, relevant to their own practice.

8.3.3 Future research

The research presented in this thesis contributes to what Wegerif (2011a) calls the ongoing debate about how dialogues between individuals create meaning. The presentation of this thesis is not an end; rather it is a contribution to the development of dialogic space and how parent-child interaction co-constructs meaning. The possibilities for future research are wide ranging:

- The themes analysed in this thesis necessitated a mainly qualitative method of data analysis. However, in another phase of work I am interested in exploring the notion of identity in relation to dialogue in more detail. This would give scope for exploring the utility of concordance software and quantitative methods of analysis in searching for key words such as 'we' and 'us' across the data corpus.

- Similarly, I am also interested in exploring *how* children introduce contextual resources into dialogues to understand how children co-construct meaning in greater detail.
- This thesis has considered the use of exploratory talk in mother and child dialogue. Investigations into naturally-occurring exploratory talk during discussions between a parent and their pre-school children dyads is an area for future research.

8.4 Concluding remarks

Situated within sociocultural theory, this thesis offers a number of theoretical contributions that extend current understandings of the value of dialogic space as a lens for investigating parent-child interactions. The contingent use of pause and the use of contextual resources in opening and deepening a space for dialogue are new contributions that have not been realised previously. This thesis also makes clear that young children, aged 30-36 months, can engage in creatively co-constructing meaning in relationships. This is very important as previous work in the field of scaffolding has failed to realise the agency of young children in the co-construction of meaning.

In summary, the contributions to educational theory that has been presented in this thesis provide significant insights into how dialogic space is opened and deepened in mother-child dialogues, particularly in relation to the role that *young children* can play in this area. Also, I offer suggestions about how practitioners might make use of these new understandings in their own practice. I hope that my research

underpins a new area of research into the contributions that young children can make to the co-construction of dialogic space during dyadic interactions.

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Appendices

Appendix A Literature review search

Appendix B Project approval

Appendix C Parent information sheet

Appendix D Mother and child consent form

Appendix E The exploratory phase of case study

Appendix F Workplace consent form

Appendix G Chart of data collected

Appendix H On the day instructions

Appendix I Gaining the best audio- and video-recording

Appendix J Semi-structured interview questions

Appendix K Further extracts of transcribed data showing occurrence of mother's questions and pause and contextual resources introduced by child

Appendix M Quantitative data for the whole corpus of data

Appendix N Implications for practice and tips for practitioners

Appendix A Literature review search

The literature evaluated in this study is concerned with adult guidance and support, and the co-construction of meaning in educational settings. Therefore, search terms were focused on these two fields. Search terms included several variations on the terms maternal scaffolding including 'maternal instruction', 'parent-child interaction', 'guided participation', 'maternal education', and dialogic teaching including 'dialogical', 'classroom discourse', 'collaborative learning', 'reasoning' and 'classroom talk'. Evaluation of the literature enabled identification of gaps in current literature and positioning of my research within the existing field of knowledge. The following search strategies were employed:

- Within the discourses of sociocultural theory, psychology and sociolinguistics search terms were devised for use in electronic searching
- The search strategy involved the use of keywords relating to maternal scaffolding and dialogic teaching
- 'one stop' searches for authors names, keywords and journal titles were carried out
- The databases Academic Search Complete, Education Research Complete and Science Direct were of particular use during searches especially in terms of 'Recommended Articles' synthetically derived from keywords and previously viewed articles
- Contact was made with three senior lecturers from The Open University to seek advice on relevant research
- The university library catalogue was used to locate books

- A manual search of books in the Walton Hall library was conducted in relevant sections including education, psychology and child development
- Access to other academic libraries including University College Birmingham, Staffordshire University and Aberystwyth University was granted through SCONUL
- An electronic search of the following research journals since 1995 was conducted:
 - New ideas in Psychology
 - Learning and Instruction
 - International Journal of Educational Research
 - Journal of Educational Psychology
- E-commerce companies such as Amazon and Ebay were used to seek online book retailers to purchase new and second hand books.
- Google and Google Scholar were used
- A manual search of local charity bookstores was carried out searching categories of education, academic and childcare
- As relevant articles, books or reports were found and read, further relevant references cited were noted, and followed up, where available
- As new periodicals became available electronically, searches of journal titles were carried out
- A Dropbox account was created and utilised for the storage and sharing of electronic journals
- Each piece of relevant literature was detailed in a word document including full references

Appendix B Project approval



The Open University

From Dr Duncan Banks
Chair, The Open University Human Research Ethics Committee
Email duncan.banks@open.ac.uk
Extension 59198
To Eliza Rooke, FELS
Subject "An intervention programme to support pre-school children's
learning of size and colour."
Ref HREC/2014/1586/Roke/1
AMS ref n/a
Submitted 2 February 2014
Date 11 February 2014

Memorandum

This memorandum is to confirm that the research protocol for the above-named research project, as submitted for ethics review, has been given a **favourable opinion** by the Open University Human Research Ethics Committee. Please note that the OU research ethics review procedures are fully compliant with the majority of grant awarding bodies and their Frameworks for Research Ethics.

Please make sure that any question(s) relating to your application and approval are sent to Research-REC-Review@open.ac.uk quoting the HREC reference number above. We will endeavour to respond as quickly as possible so that your research is not delayed in any way.

At the conclusion of your project, by the date that you stated in your application, the Committee would like to receive a summary report on the progress of this project, any ethical issues that have arisen and how they have been dealt with.

Regards,

Dr Duncan Banks
Chair OU HREC

The Open University is incorporated by Royal Charter (number RC 000391), an exempt charity in England & Wales and a charity registered in Scotland (number SC 038302)

HREC_2014-1586-Roke-1-approval



Exploring size and colour through talk

Information sheet

An invitation...

You and your child are being invited to take part in a research study. This study will form part of my Doctorate of Education with The Open University. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

The purpose of the study and what will happen

The study will look at how mothers and their preschool children talk about size and colour together. I would like to observe natural behaviour of mothers and their children. I would like to ask you if you and your child would be willing to participate in this part of my research. If you were to agree it would involve:

- Your child participating in a simple activity with one of the practitioners from [REDACTED] Playgroup. This is to gain an understanding of your child's ability in colour and size. This will take place on a [REDACTED] morning during the 'stay and play' session. This activity is expected to take no more than 20 minutes.
- You and your child will then be invited to take part in two different activities within the [REDACTED] Playgroup on a [REDACTED] morning during 'stay and play' session. Each activity is expected to last no more than 30 minutes.
- At a later date, I would like to invite you to participate in a short interview so we can discuss the activities. This is not to comment on your performance or judge your parenting skills, I simply would really value your feedback on the activities that you and your child took part in. The interviews will take place on a [REDACTED] morning during a 'stay and play' session. The interview is expected to last about 30 minutes.

Do I have to take part?

It is up to you to decide whether or not to agree to take part. If you would like some more information on taking part please speak to Eliza Rooke. If you change your mind at any time you are free to withdraw from the research study, and you do not have to give me any reasons why you have chosen to withdraw. Your child's care and education within this setting are in no way compromised by you agreeing or disagreeing to participate in this research.

How will the information collected in this study be managed?

To comply with Data Protection and Freedom of Information Acts (1998) all information collected during the study will be anonymised and your personal data will be treated as confidential. The information gathered will not be traceable back to you in any way.

Can we withdraw once the study is underway?

You can withdraw from this study at any time and you do not have to give any reasons for doing so. If you choose to withdraw after any data has been collected this can be destroyed and not used in the study. If considerable time has passed between participating and choosing to withdraw I may have already used the data collected. In this case the data will in no way be traceable back to you. If your child does not want to or is unwilling to participate during the activity it can be stopped at any time.

What will happen to the results of the research study?

The data I collect will form part of a study exploring how mothers and their pre-school aged children talk about the concepts of colour and size together. The data collected will go on to form part of my thesis for a Doctorate in Education and could be used to inform future research in the area of early years education.

Ethical research

This research study will be carried out in accordance with the ethics guidelines of the British Educational Research Association. This study has been approved by The Open University Human Research Ethics Committee. The Open University places great emphasis on ethical considerations when its students are conducting research and I have received guidance on how to go about research in an ethical manner.

What happens if I decided to take part?

You will be contacted by Eliza Rooke so that you can discuss further participation.

If you have questions or need more information about the study you can contact

Eliza Rooke, [REDACTED], Aldridge, WS[REDACTED]. Telephone: [REDACTED]
[REDACTED]. E-mail elizarooke@open.ac.uk

Contact for further information:

Research Supervisor:

Dr. Cindy Kerawalla, The Open University, Walton Hall, Milton Keynes, MK7 6AA.
Telephone [REDACTED]

Thank you for taking the time to read this information sheet

(June 2014)

Appendix D Mother and child consent form



Exploring size and colour through talk

Research Project Consent Form for Mother and Child

Contact details of researcher: Eliza Rooke, [REDACTED], Aldridge, WS[REDACTED]
[REDACTED]. Telephone: [REDACTED]

Please read the following and circle yes or no to the following:

- I confirm that I have read and understand the information sheet for the above study and I have had the opportunity to ask questions. Yes/No
- I agree to complete the activities described in the information letter. Yes/No
- I understand that both mine and my child's participation is voluntary and that we are free to withdraw at any time, without giving reason. If I chose to withdraw after observations have been made, where possible, any records will be destroyed and not used in the study. Yes/No
- I agree that anonymised quotes of what I say in interviews and on the video can be used in academic conferences and publications. These may appear online. Yes/No
- I understand that only a person with parental responsibility can give consent for the child's participation. I have parental responsibility and I agree that my child and I will take part in the above study. Yes/No

If at any time you feel your child is becoming bored with the activity or they are not happy to participate you may stop the activity. No pressure is put on you or your child to complete this activity and you are free to decide to stop at any time.

Name of Participant (Please print)
child

Name of Child and Relationship to

Signature

Date

Appendix E The exploratory phase of case study

The exploratory phase involved a period where I explored various elements of my research study; these included developing a suitable activity to focus my observations on, piloting a Video-Stimulated Reflective Dialogue technique and choosing an appropriate standardised test to assess the child's competence in colour and size.

Pilot study 1: Selecting a suitable activity

During the exploratory phase of my study I considered several activities to engage mother and pre-school child. Previous studies investigating maternal interaction with pre-school children have used wooden block construction tasks with a set outcome (Wood and Middleton, 1975; Meins, 1997; Carr and Pike, 2012) or variations on this such as Lego blocks (Salonen, Lepola and Vauras, 2007). Early on in my research journey I dismissed this type of activity because of its restrictive nature (Vandermaas-Peeler *et al.*, 2003). However as the focus of my study diverted away from scaffolding and I became more aware of dialogic education my interest in block tasks was rejuvenated from an alternative perspective. During the redefining of my study I have proposed several activities to engage mother and pre-school child:

1. I contemplated observing mother and child whilst playing. My motivation for doing this was informed by Hedegaard's (2007) study that investigated preschool children's play and concept formation. By piloting a series of observations on mothers and their pre-school playing I came to realise that 'play' can mean different things to different people; a spectrum from play

occurring for no real purpose and having no overt goal (Garvey, 1977) to more structured and goal directed activity (see Moyles, 1989). Due to the broad nature of 'play' I decided I needed to redefine the focus of my activity to be more specifically about colour and size.

2. I created and piloted my own books about colour and size. The books were set within my workplace and the main character was our 'Talking Ted' mascot. In order to create the books I photographed Talking Ted in specific situations and wrote a text to accompany the photos. I then compile these into two books on the PC, printed, laminated and bound them. The positive response I received from children and parents about the books indicated the concept-focused books could be a useful resource for engaging mother and child in concept dialogue. However, I was concerned that the books may stifle the dialogue between mother and child. The books may not provide the opportunities to talk about colour and size as objects might. Also, Hedegaard (2007) suggests that young children may not be able to relate to pictures of situations as well as they can to the actual situation as they may not be able to infer what the picture in the book represents.

3. I considered the use of wooden blocks for the second time. In evaluating how previous studies had incorporated wooden block tasks in the empirical research I considered Leonid Sakharov's functional method of double stimulation – otherwise known as the Vygotsky/Sakharov Blocks (Vygotsky, 1986). This method of studying concept development has explicit relevance to my study as it is designed to 'engender the formation of new concepts,

and to reveal the process involved as this development takes place' (Towsey, 2007, p.2). The Vygotsky/Sakharov Blocks test has been replicated in more contemporary research to establish whether similar patterns of concept formation could be observed over seventy years after the original test was designed (Towsey, 2007). Conclusions drawn from Towsey's replication of Vygotsky/Sakharov Blocks indicate that the same or similar observations were made in a contemporary context illustrating concept formation is a length process that begins in early childhood and ripens as the individual develops. Despite their direct relevance to concept formation the Vygotsky/Sakharov Blocks were not suitable for the methodology I desired in my research. The functional method of double stimulation is concerned with an individual's learning of concepts through the use of more than one stimuli; this was diverging away from my ontological belief of meaning being co-constructed in dialogic space.

However, wooden blocks could be used as a resource in concept-focused activity but the focus of my analysis would be the dialogue between mother and child. Knowledge is not transferred from a more knowledgeable individual to a novice, but, rather meaning is co-constructed between the two individuals through dialogue; fixed truths do not exist, rather meaning is debated through joint endeavour. Wooden block tasks may be utilised in my research but my focus would be on how mother and child *negotiate* meaning together rather than maternal guidance. From the perspective of Wegerif (2011a) concepts are never static but woolly and indistinct thus the concept is created and negotiated through joint debate. The concept is not a

fixed 'truth' to be trained but a dialogic co-construction of meaning; a creative endeavour. Wooden blocks and instruction could be supplied to mother and pre-school children as a means of *focusing* debate on specific concepts, size and colour, but analysis would concentrate on how the pair creatively co-constructed meaning in the space of dialogue.

Pilot Study 2: VSRD techniques in semi-structured interviews

Due to the lack of research using the VSRD technique with participants talking about experiences with their own children, I carried out a pilot study with one mother and child dyad to decide if this technique would be suitable to use in my semi-structured phase of the case study. Video-Stimulated Reflective Dialogue is a technique that has been used successfully in education-based research (Muir, Beswick and Williamson, 2010; Rowe, 2009; Lyle, 2003), with pupils as well as teachers (Tanner and Jones, 2007) and in cross-cultural educational inquiry (Stevenson, 2015). I was interested with using the VSRD technique within semi-structured interviews to focus the participant's attention on aspects of the observational data that were interesting to my research inquiry, how dialogic space is opened, widened and deepened in parent and pre-school child dialogues. The pilot study is detailed below.

I applied for and was granted ethical approval from HREC to trial a semi-structured interview using the VSRD technique with one mother-child dyad. I gained informed consent from a mother for herself and her child to participate in this pilot study. The reasons for carrying out the study, procedure and assent of the child were fully explained to the mother prior to her giving consent. A video-recorded observation

of a mother and child engaged together in a wooden block activity was made prior to the semi-structured interview taking place. This recorded observation was used in the VSRD within the semi-structured interview. The participant knew prior to making the recording that she would be watching the footage afterwards.

My findings from this pilot study were:

- The semi-structured style was appropriate for structuring an interview containing the VSRD technique
- The video-playback provided a good focus and stimuli when talking to the mother about her interaction with her child
- Despite my concerns relating to the ethical use of the VSRD technique with participants talking about experiences with their own children the mother did not appear to be upset or embarrassed watching herself back on the video
- The audio and visual quality of the filming was very good making it easy to watch and listen to in the video playback.

The conclusions I made from this pilot study were that VSRD technique could be suitable to use in my semi-structured phase as a means of focusing the mother's attention to specific areas of the focused activity that I intended to discuss. Based on the literature reviewed on VSRD and this pilot study I decided to use VSRD techniques in the semi-structured phase of this case study.

Pilot study 3: Standardised testing of children's capabilities in colour and size activity

The age range of the participating children in the main study was 30-36 months.

This age range was carefully selected during the exploratory phase using Early Years Foundation Stage (DCFS, 2007) guidelines on expected achievements for typically developing children. It was also influenced by sociocultural theory of the young child's conceptual development (Vygotsky, 1986), and my own observations of the capabilities of young children within my workplace during the exploratory phase of my case study. The observations in my workplace were made using a standardised test for concept formation, the Object Classification Task for Children – OCTC (Smidts, Jacobs and Anderson, 2004).

I considered and dismissed other tests that measure concept formation for a number of reasons. Many concept formation tests are unsuitable as they are too complex for use with preschool children (Smidts *et al.*, 2004). Espy's (1997) 'The Shape School' was considered but dismissed as the test did not measure the dimensions I wished to examine. The Shape School focuses on measuring children's abilities in inhibition and switching that are not relevant to my study. The Flexible Item Selection Task – FIST (Jacques and Zelazo, 2001) was also considered and dismissed. FIST measures the child's ability to identify single dimensions and switch flexibility between dimensions (Jacques and Zelazo, 2001). FIST was dismissed in favour of OCTC because FIST uses non-identical items that are less suitable for children in the pre-school age range as children in this age group find difficulty in abstracting a relevant dimension (Jacques and Zelazo, 2001). Another reason I have

chosen the OCTC test rather than the FIST test is the FIST is an inductive test, where the child is required to identify the relevant dimension themselves. In opposition OCTC is a deductive test, where the child is told which dimension they are required to categorize (Smidts *et al.*, 2004; Jacques and Zelazo, 2001).

The OCTC was administered to test the child's ability to categorize size and colour. No changes were made to the original test as the test measures the dimensions I intend to investigate. The test was administered in accordance with the author's guidelines (Smidts *et al.*, 2004). The OCTC test was only used to test colour and size so the function component was omitted from the test, thus the OCTC test was used at setting 2 as described in Smidts *et al.* (2004). The objects used in this test were toy cars. There were 4 toy cars used a small yellow car, a big yellow car, a small red car and a big red car.

A pilot study was carried out in July 2013, within my workplace, using a standardized test, the Object Classification Task for Children (OCTC) to assess the children's abilities in colour and size activity. The sample group was 19 children aged between 22 and 40 months. The OCTC test guidelines required two practitioners to carry out the test with each child; one practitioner to interact with the child, explaining what the child should do and a second practitioner to record the scores. I asked a colleague interact with the child and I was present to record the scores for each child. In preparation for the trial I wrote down clear guidelines for the practitioner interacting with the child to follow. This was to ensure that as far as possible each child was given the same instructions and guidance on the test. These guidelines were taken from the Smidts *et al.* (2004) research paper so that

the original test could be replicated as closely as possible. A copy of the practitioner guidelines is supplied in this appendix. I also created my own recording chart so the child's responses and scores could be recorded during the OCTC test (supplied in this appendix). The results of the OCTC tests in the exploratory phase helped me to make informed decisions about my semi-structured phase. My findings from the pilot OCTC test were:

- The children at the youngest end of the sample (22-27 months) were too young to sit still, concentrate and understand what was being asked of them.
- The children at the oldest end of the sample (39-40 months) knew the answers to the questions and were able to sort the toys without difficulty, producing a ceiling effect.
- The children in the 30-36 month age range, however, were able to stay on task and understood what was being asked of them but did not necessarily know how to categorize the toys into colour and size categories.

Based on this small sample and the literature I had engaged with the semi-structured phase of my case study focuses on children aged 30-36 months.

Carrying out the OCTC test in the exploratory phase has provided me with the opportunity to reflect on and finesse the test procedure in the semi-structured phase:

- I was satisfied with the practitioner guidelines I complied before the tests were carried out. I did not make any changes to these.

- I made a small adaptation to my recording chart, to include the name of the coder. This was needed for the purpose of identifying who had coded the test.
- I realised it would be beneficial to video-record the OCTC test. In the pilot, I had completed all of the recording sheets real-time. However, in using this approach I had nothing to refer back to after the event. This could pose a problem, for example, if I wanted re-visit the observation to confirm or refute a record.

Object Classification Task for Children (OCTC)

Instructions for practitioner

Introduction

Give child the toys

“See these toys? They are the same as the ones you have there, you see? The toys that are the same go together. Can you put the toys that go together on this side of the table (practitioner points to one side of the table) and the other two that go together on that side of the table (practitioner points to other side of the table)?”

If child does not understand the instructions

“So can you tell me which toys are the same? (Practitioner waits for the child to respond.) See, they go together because they are the same. And the other two also go together because they are the same as well. Now put these toys (practitioner points to one pair of toys) on this side of the table and put the other two toys on that side of the table.”

Then with new four toys

“Ok, now let’s do the same with these toys. Can you put the ones that go together on this side of the table and the other two that are the same on that side of the table?”

Get cars out

“Ok, now let’s do the same thing with these toys. Can you make two groups for me? But something has to be the same about the toys in each group. Can you put one group on this side of the table and the other ones that go together on that side of the table?”

[Allow child time to do task] “So, can you tell me what’s the same about these toys?” [Practitioner points to a group of toys] And what about these toys? [Practitioner point to other group of toys]

Repeat

[Mix toys up] “Can you make two groups for me again? But now something else has to be the same about the toys.” [Allow child time to do task] “So, what’s the same about these toys, and what’s the same about the other toys?”

Object Classification Task of Children (OCTC)

Name of Child:

Name of observer:

Child's age in months:

Date of OCTC:

Condition	Record	Score
Free Generation	Colour	
	Size	
Identification	Colour	
	Size	
Explicit Cueing	Colour	
	Size	
Total		



Exploring size and colour through talk

Permission to carry out research

Dear [REDACTED]

I am writing to you to ask for your approval to use the setting, [REDACTED], in my research study. I am doing a small-scale research study as part of my Doctorate in Education with The Open University. My proposed research has been checked and approved by the Open University Ethics Committee and any data collected will be used in a way to protect confidentiality and anonymity.

I am planning to explore dialogues between mother and pre-school child whilst engaged in problem-solving activity. I ask for permission to:

- Gain access to records held by the setting regarding families personal details
- Approach potential participants through the 'stay and play' sessions
- Observe mother and pre-school child in the setting with the mother's prior consent

Thank you for taking the time to read this. If you agree to the setting being used could you please complete your details below.

I give permission for the research student, Eliza Rooke, to use this setting for the research purposes set out above.

Print Name:

Signature:

Position Held in Setting:

Appendix G Chart of data collected

Code	Child age in months	OCTC	Colour activity	Size activity	Semi-structured interview	Comments
MC1	35	1				No observations
MC2	33	4	*	*	*	Data used in analysis
MC3	35	0	*	*	*	Data used in analysis
MC4	30	2	*	*	*	Data used in analysis
MC5	34	0	*	*	*	Data used on analysis
MC6	35	0	*			Colour activity only
MC7	36	2	*	*	*	Data used in analysis
MC8	36	3	*	*	*	Data used in analysis
MC9	33	3	*	*	*	Data used in analysis
MC10	30	0	*	*	*	Data used in analysis

MC11	36	4				Ceiling effect in OCTC
MC12	35	2	*			Colour activity only
MC13	30	4				Ceiling effect in OCTC
MC14	31	2	*	*	*	Data used in analysis
MC15	36	0	*	*	*	Data used in analysis
MC16	34	8				Ceiling effect in OCTC
MC17	34	1	*			Colour activity only
MC18	33	8				Ceiling effect in OCTC
MC19	36	6				Ceiling effect in OCTC
MC20	35	0	*	*	*	Data used in analysis
MC21	32	1	*	*		No interview
MC22	30	0	*	*	*	Data used in analysis
MC23	36	2	*	*		No interview

MC24	36	8				Ceiling effect in OCTC
MC25	30	1	*	*		No interview
MC26	31	0	*	*	*	Data used in analysis

Appendix H On the day instructions

Thank you for agreeing to participate in this activity.

I would like you and your child to sort these wooden blocks according to their colour/size*

Please remember I am not looking for a correct way to complete this task; I am interested in observing the talk between you and your child.

Please do not feel under any pressure to complete the activity, particularly if your child does not want to.



* Please note either the word 'colour' or 'size' was present depending on activity.

Appendix I Gaining the best audio and visual recordings

In order to obtain the best quality video and audio coverage I took the following procedures:

External noise

- External noise was kept to a minimum by closing all doors and windows
- Signs were attached to the three entrance doors stating 'Do not enter, recording in progress' to inform other users of the building that recording was in progress

Internal noise

- The smallest of the rooms in the children's suite was selected to avoid the echo effect of a larger empty open space.
- The room had good features for low noise reverberation such as cork flooring and acoustical ceiling clouds.
- Ensuring all technology such as Interactive Whiteboard and computer were turned off before filming started to prevent background 'humming'

Framing of observations

- Camera was set up on tripod in room
- Camera positioned to directly frame activity table
- To reduce procedural reactivity a fixed camera was used; this was turned on at beginning of observation and left running throughout. Despite the risk of

not capturing everything in frame this was seen as more desirable than having another person in the room operating the camera.

Quality of picture

- Opening blinds to allow natural light into room
- Switching on overhead lights
- Ensuring no obvious shadow was cast over activity table

Before filming

- Ensuring battery was fully charged before a morning's filming
- Ensuring sufficient memory was available before morning's filming
- Ensuring camera had not been knocked and thus still in frame before recording
- Ensuring volume was at correct setting for recording

Appendix J Semi-structured interview questions

Warm-up questions

- Thank you for participating
- Enquire about child (How's XXX?)
- Expected interview duration about 30 mins
- Explain about presence of laptop – to look at activity together
- How did it go (on the day)

Initial questions

- What do you feel the purpose of the activity was?
- How did you feel it went?
- Did your child behave as you expected/ as normally would do?

VSRD guided questions [Link to personal sheet of questions](#)

- Can you tell me what is happening here?
- Why did you do that? Motives, reasons etc
- Can you tell me, in a little more detail, about ...
- Can you explain to me what XXX is?

Closing remarks

- Thank you for agreeing to take part in this interview, your views are really important to me
- Explain next stage of my research

Appendix K Further extracts of transcribed data showing occurrence of mother's questions and pause and contextual resources introduced by child

Data code	Line numbers	Colour or size activity	Transcription extract
Data presented in this thesis			<p>Highlight Key:</p> <p>Evidence of mother's questioning and pause opening dialogic space</p> <p>Evidence of child's introduction of contextual resources deepening or widening dialogic space</p> <p>Evidence of opportunity to widen dialogic space through contextual resource introduced by child</p>
MC2(1)	17-24	Colour	<p>M: this is a red one (.) Can you see, we are looking at the colour and the colour of this block is red (2) I wonder (.) What else can we see in this room that is red?(.) You see anything red XXX?(.)XXX?</p> <p>C: Glass, that, over there ((points))</p> <p>M: may be(.) Oh, I know, I see ((points to coloured glass windows)) look at the windows XXX, now then they're really good, I can see a red window, look XXX((points)) (1) Can you see, this ones red, a red window, look XXX ((looks at child)) and that one ((points)) that's yellow</p> <p>C: 'llow</p> <p>M: that's right, yellow</p>
MC3(1)	83-98	Colour	<p>M: Right then shall we put all of the red ones over here? ((points))(1). Can you see any red</p>

			<p>ones?(5)XXX can[you?]</p> <p>C: [This] one, this one red ((picks up a red block))</p> <p>M: Well done XXX your wicked! Can you find any more?</p> <p>C: ((looking at blocks in centre of table, picks up blue block))giggles</p> <p>M: Is that a red one? ((mocking tone, playfully puts hands on hips))</p> <p>C: No ((laughs))</p> <p>M: Why is that not a red block?(1)</p> <p>C: Erm, coz it's not</p> <p>M: But do you know why it's not?(1)</p> <p>C: ((picks up initial red block)) coz this one a red one</p> <p>M: That's right that one is a red one. So (5) ((picks up red block and blue block)) if this one is red why is this one not red?</p> <p>C: It's a different colour ((giggles))</p> <p>M: Can you tell me what colours they are? (3) can you point to the blue one? (2) tell me which one's blue (.) XXX</p>
MC4(1)	47-51	Colour	<p>C:I place it here, ((puts the block in small block pile, immediately picks it up again)) it goes 'ere, I put it with these ones ((places block with other big blocks))</p> <p>M: Are you sure that's in the right pile? (2)</p> <p>C: It with a big ones</p> <p>M: Does that make that one a big block too? (3) I think we need to have another look, don't</p>

			you? (2)
MC5(2)	27-53	Size	<p>M: Shall we have a look at doing this activity together? (1) I think we could, it looks like something we have done [before]</p> <p>C:</p> <p>[The blocks</p> <p>M: Yey, the blocks (1) shall we do it together? (2)</p> <p>C: Do it together, mummy, we do it together</p> <p>M: Okay then, let's make a start. So we are looking for big blocks this time (1) how shall we find the big blocks? (2) What do you think? (1) What do you think we should do (1) to find all the big blocks?</p> <p>C: Put them all over here ((moving all blocks towards her body with arm))</p> <p>M: we could, (1) we could put them all over there (2) By what's that going to get us? (2) We need to move big blocks away from littlies</p> <p>C: You have those ((pushing random blocks toward mother)), sharing mine</p> <p>M: Okay but I've got big and littlies over here (1) what have you got over there?</p> <p>C: Blocks</p> <p>M: Yes, they are blocks. What I mean is, look at these two ((picks up two red blocks, a big and a small block)) blocks (1) can you see they are different?(1)</p> <p>C: Yes</p> <p>M: so why are these not the same (1) different? (2)</p>

			<p>C: Coz you got one of them ((points to big block in mother's hand)) 'n' one of them ((points to small block in mother's hand))</p> <p>M: Big ((brings big block closer to child)) and little ((points)) so then if that's big ((points)) can you find us another one of them (2)</p> <p>C: ((looks at blocks on table)) I got that one ((selects big block))</p> <p>M: now compare it (2) does it match mine? (2) ((brings big block closer to child)) are they the same?(1)</p> <p>C: ((taps block she is holding with one mother is holding)) same, tis the same, (1) as yours mummy</p>
MC7(1)	50-76	Colour	<p>M: So put a blue one on this pile ((points to blue block to indicate pile))</p> <p>C: (3) ((selects red block))</p> <p>M: Why have you picked that one?</p> <p>C: Their tis same ((incorrect response))</p> <p>M: Why do you think they are the same? (3) I think they are different (2) because (.) that's blue((points)) and that's red ((points), so that goes in a different pile to that cause different, it's a different colour blue ((points to pile)) and red ((takes block from child))</p> <p>C: [But...]</p> <p>M:[Look] let me get this one ((blue block)) and you find me another one the same colour, blue</p> <p>C: Blue ((picking blue block from table))</p> <p>M: That's [it]</p> <p>C: [Like] your scarf ((looking up at</p>

			<p>mother))</p> <p>M: Err, well my scarf isn't, or though ((looks down at scarf, picks up end of scarf)) it's got lots of colours in it, I suppose, multi-coloured [you might say]</p> <p>C: [Blue] ((points directly at scarf))</p> <p>M: Come round here and show me, ((opens arms))</p> <p>C: ((leaves chair and rests torso on table)) blue ((no pointing))</p> <p>M: Do you mean this one, the flower, here ((points)) well, err yes, it's not really blue, it's more of a, a erm, purpley colour I suppose (.) Let's see, see if we can find any blue, ((looking at scarf)) here, here that's the sort of blue, although it's different the blue here((picks up block)) there are lots of blues, different ones shades, oh () does get confusing</p> <p>C: ((reassumes sitting position)) I like your scarf mommy (5)</p> <p>M: Thank you darling, now let's get on with sorting these blocks, you did really well then, finding me a blue block, shall we look for another one</p>
MC8(2)	115-128	Size	<p>M; So now then my prince where will we put this one ((picks up big block, flips it in hand))</p> <p>C: Cor, I do that</p> <p>M: Just once then, then tell me which pile the big block goes in ((leans forward putting big block in child's reach))</p> <p>C: ((takes block, tries but unable to flip as mother has done))</p> <p>M: So then, where does it go (buss-ta)?</p>

			<p>C: You said big one, like Daddy's car, Daddy got big car</p> <p>M: Yes darling Daddy's car is big it's so he could fit you all in</p> <p>C: Is your car big Mommy, like Daddy?</p> <p>M: Erm, well my car is smaller than Daddy's, so I've got a little car</p> <p>C: But Daddy big car</p> <p>M: Yes, Daddy car big, like your big block, which pile will your big Daddy car block drive to?</p>
MC9(1)	19-32	Colour	<p>M: oh no what's happened here then ((laughs)). Okay then shall we try to sort these bricks into the right colours? (1)</p> <p>C: yeah</p> <p>M: what you think we should do? (2), got any ideas? (1)</p> <p>C: ((shrugs))</p> <p>M: I got an idea. Would you like to hear my idea of what we could do? (1)</p> <p>C: we could... We could put them all in a big pile here ((pushes blocks with arms into centre of table))</p> <p>M: we could do that but look we haven't sorting them into colours. I think we're meant to put each colour in a different pile, what do you think?</p> <p>C: let's make piles!</p> <p>M: right then shall we put all of the red ones over here? ((points)) (2). Can you see any red</p>

			<p>ones?(5)XXX can[you]</p> <p>C: [This] one, this one red ((picks up a red block))</p> <p>M: well done XXX your wicked! Can you find any more?</p>
MC9(2)	30-39	Size	<p>M: so erm, something... Something like that!</p> <p>C: ()</p> <p>M: right, yeh () (.) um, let's stop for a second, let's just...</p> <p>C: ((stops arranging blocks and looks up))</p> <p>M: now then, we want to (.) Get all the big ones over here((points)) and all the little ones smaller over here((points)) coz they got all muddled up, haven't they so there</p> <p>C: be like Nanny's dog</p> <p>M:erm, nanny's dog isn't that big, you mean Nanny XXX, her dog?, Well I suppose you do coz Nanny XXX doesn't have a dog any more.</p> <p>C: () ((dog's name)) he's big, he must be big because he licks my face right me know now</p>
MC14(1)	111-119	Colour	<p>M: So then, we said this was a blue [block] ((pointing))</p> <p>C: [Blue] one ((pointing))</p> <p>M: This was the (2) red [one] ((pointing))</p> <p>C: [red] ((pointing))</p> <p>M: And then, missy, go on then, what colour is this one? (1) the last one (2) can you</p>

			<p>remember? (.) tell me, we said blue ((pointing to blue block previously used)), red ((pointing to red block previously used)) and (1) do you know this one? (2)</p> <p>C:Yellow</p> <p>M: Okay then, now I want you to find me something yellow in here</p>
MC15(2)	34-44	Size	<p>M: So, (.) what can we think of that's big? (2)</p> <p>C: Thomas track, in ()</p> <p>M: Your Thomas track, at home, that's big, that's bigger than this table,</p> <p>C: Thomas chugga chugga choo choo</p> <p>M: but then Thomas he is little, small, in comparison to the track, isn't he, or he would fit on?(2), he wouldn't fit on the track if he was big ((parts hands wide)), so Thomas has to be small to fit on the track.</p> <p>C: ((smiles))</p>
MC20(1)	13-38	Colour	<p>C: We could build a tower, coloured towers ((grabbing blocks and placing them on top of each other))</p> <p>M: actually, that's really useful (.)yes, so look, XXX, this side of the table is red ((pointing to red half of table)) and this other side is blue ((gesturing to side of table nearest child)) (2) so, (.) we could put all the red ones on the red table and all the blue ones on the blue table (.) then we'll just be left with the yellow ones, (.) ok let's do it!</p> <p>C: Do it!</p> <p>M: yeah, let's do it, I'll make room (.) ((pushes blocks to one side of red half of table with</p>

			<p>whole arm movement))(2) I think we should start with this one ((selecting red block from pile))</p> <p>C: that one ((points to block in mother's hand))</p> <p>M: which table is this going on? (2)</p> <p>C: ()</p> <p>M: shall I put it here? ((gestures to red side)) or here?(3) ((places it down on blue side)) (3) is that right? ((Looks at child, smiles)),</p> <p>C: ((laugh))</p> <p>M: Have I been a silly sausage? (1) and put it on the wrong table? (2)</p> <p>C: Silly sausage!</p> <p>M: why am I a silly sausage? (2) What have I done wrong? (2) ((Sits back in chair, hands raised)), does it go here instead? ((Moves red block to red half of table)) (2) I think it does. So if that a red block on a red table where are we going to put the blue one? (1)</p> <p>C: Shall we, shall ((looking at red side of table)), here, put it here ((points to blue side of table)), do you want to put blue one here Mummy, or shall I do it ((holds out hand))</p>
MC22(1)	87-93	Colour	<p>M: Go on then (1) you put it in the pile (2)</p> <p>C: ((looking at block in hand))</p> <p>M: are you going to do it?(3)</p> <p>C: ((moves block in hand))</p> <p>M: are you thinking about where to put it? (2) Are you going to put it with the other ones(2)</p>

			<p>look here, put it with these ones ((points to blue block pile)) (1)</p> <p>C: ((smiles, places blue block on top of another blue block in pile))</p>
MC26(1)	87-93	Colour	<p>M: Yes, so(.) That's blue one,</p> <p>C: Big blue boat, in there ((points))</p> <p>M: Yes, the blue like the boat you like, you know the big blue boat, through there (points to playroom) (.) This blocks blue, like the boat and the blue sea it sails on, ((sings)) 'The big ship sails on the alley, alley oh'</p> <p>C: Alley alley oh ((laughs))</p> <p>M: ((laughs)) (2), So our big ship block, where's it going to sail too? ((waves block in air like it's on the sea))</p> <p>C: There! ((still giggling, points to blue blocks))</p> <p>M: Let's sail it over there then, ((manoeuvres block through other blocks to pile))</p>
MC26(2)	134-143	Size	<p>C: That one small mummy ((holding big block))</p> <p>M: No, well, (.) that's ones actually a big one, block, (1) Do you see? (1) ((picks up small block)) this ones a small one, and that's ((gestures to block in child's hand)) is a big block (2) Can you see they are different? (3) but (.) well, I suppose they are both quite small really, compared (.) to say this table ((places block back on table)) (2) but then this table is small compared to our table at home, (1) you know, where we, we eat dinner? (2) and do playdough..</p>

			<p>C: 'ough, 'ough, can we do 'ough?</p> <p>M: not now</p> <p>C: maybe later</p> <p>M: maybe later</p>
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Appendix M Quantitative data for the whole corpus of data

Code	Colour (1) or size (2) activity observation	Counted occurrences of sub-theme	
		Resources introduced into dialogue by child	Pause after mother's question
MC2	1	3	26
	2	2	23
MC3	1	1	34
	2	4	31
MC4	1	2	27
	2	2	20
MC5	1	3	39
	2	2	23
MC7	1	1	15
	2	3	18
MC8	1	3	12
	2	4	10
MC9	1	2	22
	2	3	20
MC10	1	4	13
	2	3	18
MC14	1	2	19
	2	2	18
MC15	1	1	13
	2	1	14
MC20	1	3	31
	2	3	29
MC22	1	2	12
	2	1	8
MC26	1	2	34
	2	1	25

Appendix N Implications for practice and tips for practitioners

Dialogic Space during Mother-Child interaction in the Early Years

The information displayed here is based upon a four year research project with mothers and their pre-school children. The project focused on how talk aided children in understanding the concepts of colour and size.

Implications for Practice arising from the research project

Consider the following when you are preparing an environment for pre-school children and their carers to share:

- What resources do you provide for children and their carers to play with?

Are resources available that will encourage talk about concepts?

Is the environment rich in resources that inspire talk?

Are different resources available for each session?

Do you vary/rotate resources or put the same toys out each session?

Think about providing different resources that may encourage children
to talk with their carers about concepts such as colour and size.

Vary the resources offered so children and carers have something new to explore

- How do you arrange the available space?

Do you arrange furniture so children are encouraged to sit and engage with their carers?

Do you provide adequate seating so carers as well as children can sit at activity tables?

By arranging child-sized and adult-sized seating together around the room
you are encouraging carers and children to sit together and interact together.

By providing adequate seating at the activity
tables you are encouraging carers to join in and interact with their child.

If carers seem uncertain at first, encourage them to be involved in activities.

Tips for practitioners arising from the research project

Do you recall the last conversation you had with a pre-school child?

Consider the following:

- Did you give the child adequate time to tell you their perspective?

All too often we can ask children lots of questions but
do not give enough time for the child to answer.

Next time you are engaged in conversation with a child ensure
you are involved in a dialogue of both your own *and* the child's voice.

It's easy! Pause, just for a couple of seconds, after you have posed a question.

Try it! You may be surprised by what you find out by simply giving
the child the opportunity to tell you their perspective

- Were you interested in what the child had to say?

Children often have lots of things they like to talk to us about. Pets, toys
from home, what they did at the weekend...

Think how you can incorporate these things into your
conversations in a meaningful way.

How do I do It???

It's easy! Think what relevance the child's suggestion could have to what
you are trying to teach them.

Try it! Next time you are talking with a child consider how you can make
their comments relevant in relation to what you would like to achieve
through dialogue.